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SIM Hack

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Importance of
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WELCOME TO THE HOLODECK

The technologies that will make it happen is now here



PLUS: We review the ASUS Zenfone 2, ILLEGEAR D5, ASUS GTX 980 Gold Edition, and Honor 6 Plus

ISSN 1675-0322





4K Ultra High Definition

See the big picture with all the details

The expansive 40" class Ultra HD professional Philips display gives you the room to spread out, see the big picture and all the details in Ultra High Definition.



- UltraClear 4K UHD (3840x2160) resolution for precision
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Model Name	BDM4065UC
LCD Panel Type	VA LCD
Backlight Type	W-LED system
Panel Size	39.56 inch / 100.5 cm
Effective Viewing Area	878.11 (H) x 485.35 (V)
Aspect Ratio	16:9
Optimum Resolution	3840 x 2160 @ 60Hz

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Second Screen Life

Today, we are not just accosted with data from the internet and newspaper - thanks to

interconnectivity with the internet, we get data overload from our mobile phone - the one screen that is now essentially glued to our hands.

We have seen the rise and fall of many services, devices and products over the years, but the smartphone has evolved from something that we want, when it first came out, to something that we need. Imagine a day without your smartphone within your reach. Your life is essentially in there.

That is why data protection is such an important topic to talk about, and why data security is something that everyone should have in mind every time they use their device on the net.

On the other hand, we also see the rise of a subset of users that voluntarily collect data about themselves in the hopes of bettering themselves. These lifeloggers depends on the interconnectivity that exists today between them and their devices.

Talking about devices, a pair of big name items is in our test lab list. It starts with G, and ends with either the number six or the letter 'e.' We also check out one of the earliest Intel Core M products on the market, and a gaming computer that is born from our own back yard. Plus, we are one of the first few to review the new Microsoft Surface 3 - so check it out in our Test Labs pages.

For some light reading, check out our piece on the re-emergence of Thunderbirds on the small screen.

Thanks for reading, and have a great day ahead.

Sharil Abdul Rahman



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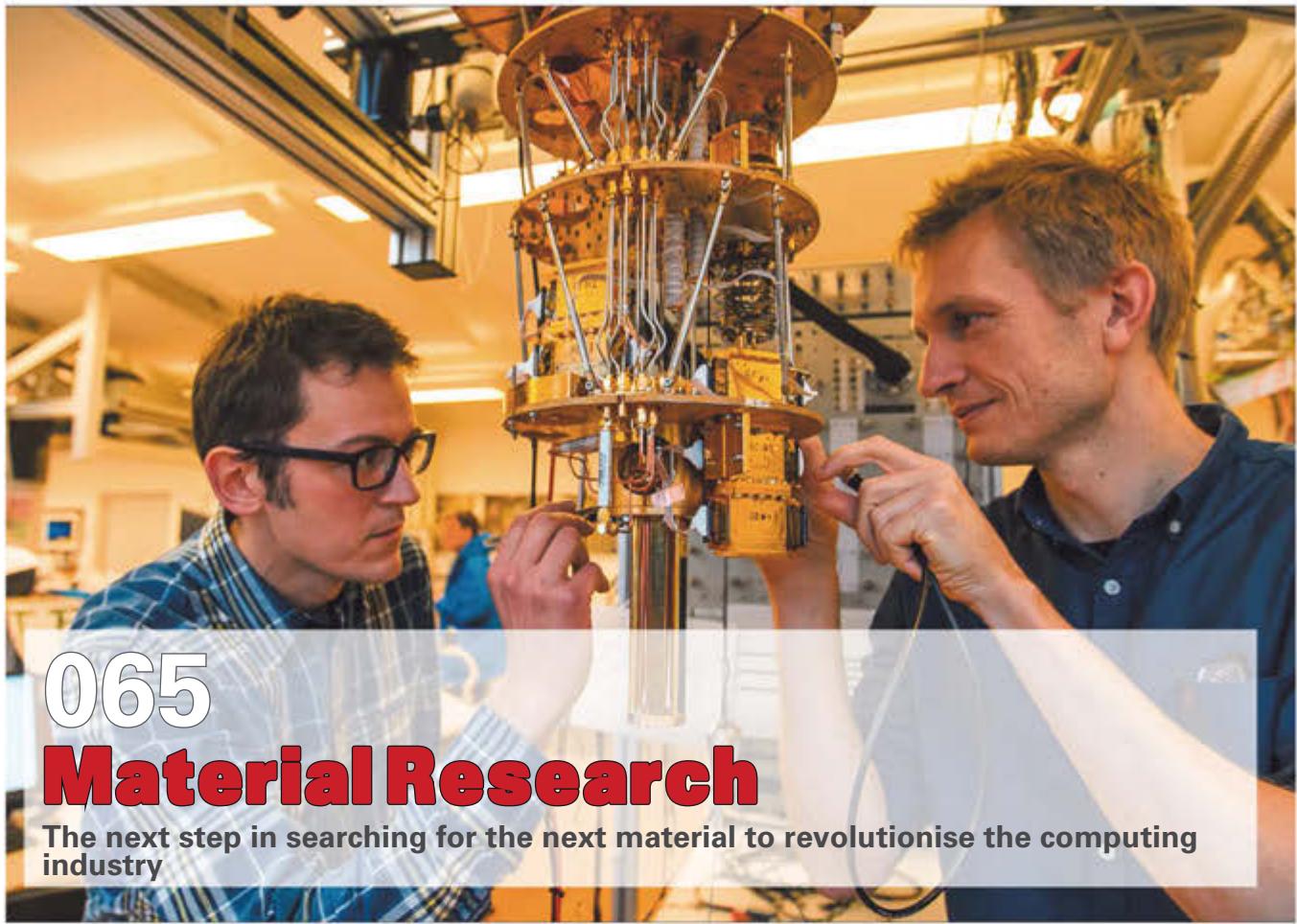
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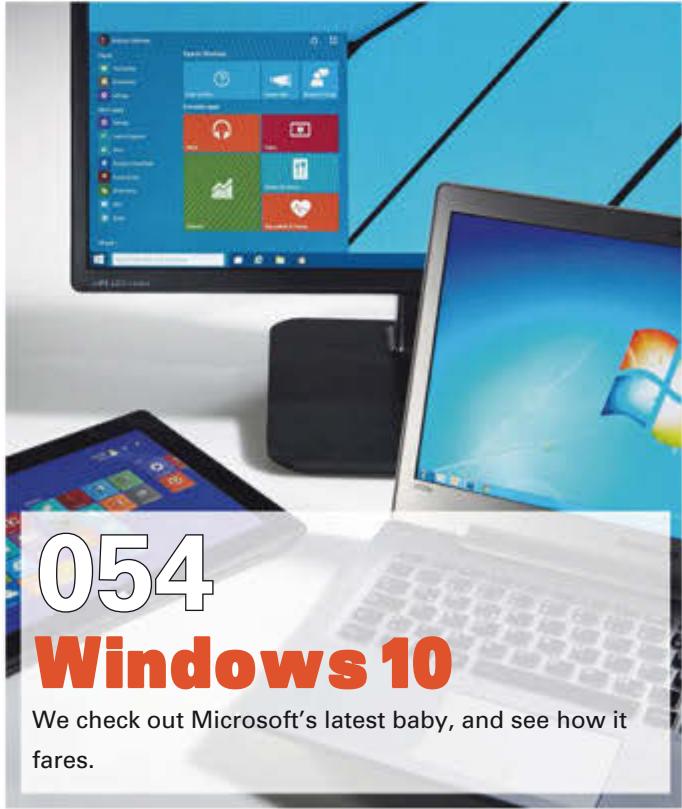
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The next step in searching for the next material to revolutionise the computing industry



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What does the law say about this?



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Windows 10

We check out Microsoft's latest baby, and see how it fares.



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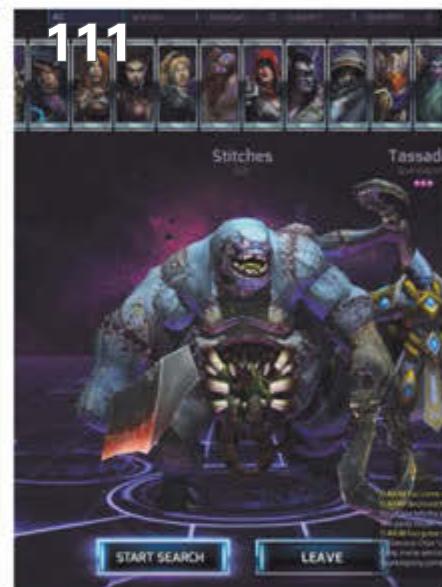
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CHIP Downloads

We're back with our monthly dose of interesting, free and handy tools for you to enhance your PC experience. If you want to know how you can get these files, follow the instructions below:

1. Head on our website @ [www\(chip.com.my](http://www(chip.com.my)) and right at the top, click on the "Downloads" tab
2. After that, click on the respective month's post. You will then be prompted for a password. The password can be found on this page monthly.
3. Navigate using the tabs and pick the categories you want to download the files from. Once you find the file you want, just click on it and you're good to go!

And it's as easy as that!

PASSWORD FOR JUNE 2015 - PCIeExpress

Featured Tools

iStats

iStats is a nifty tool that allows you to monitor your PC or Mac from any remote location with stats display such as CPU, memory, disk space, network usage, temperatures, fan speeds and more. This software includes history graphs for most of the stats which covers hourly, daily and weekly ranges with the Mac edition able to go up to a yearly coverage. This software is also secured via a five digit passcode which can be used to restrict access.



Gramblr

With Gramblr, you can now upload pictures directly on to Instagram via PC or Mac. Download the Gramblr tool from www.gramblr.com and install it. After starting the tool, log in with your Instagram credentials. Now click on "Choose File" to upload a photo. The picture must have a precise resolution of 650 x 650. You can also add a description to the photo after clicking on "Upload". After confirmation, Gramblr will post your picture.



CCleaner

CCleaner is one of the world's most beloved PC optimisation tool as it is easy to use while making your system faster by cleaning up files and unclogging slow settings. As advertisers are using your browsing history and cookies to cater to their whims, CCleaner erases your presence and history before you browse keeping your identity confidential. Another added advantage of CCleaner is it helps reduce system errors and lags caused by cluttered registry which this application helps to clear up.



Essentials

Our list of essentials consists of programs and software such as graphic drivers, browsers, compression software and even Cloud storage software that will improve a PC user's experience. The links on our website won't provide you with the files, instead it will lead you to the developers' official website, where you can find the right file for you.



June 2015

The Monthly Ten

PasswordDepot Server 8.04

Operating System: Win XP/Vista/7/8

So many services use passwords and managing said passwords are never easy. A server application would prove to be beneficial in this area which is where the AceBIT Password Depot Server comes in. Install the software on a PC as a server for other users. Log in, create individual users & passwords.



ClipboardFusion 3.2

Operating System: Win XP/Vista/7/8

Working on the Windows Clipboard is tedious and short on features. This brings us to ClipboardFusion 3.2 which offers functions that you wouldn't think twice of acquiring such as the tool that removes the formatting of a copied text as well as incorporating it into other applications.

InViewer 0.87

Operating System: Win XP/Vista/7/8

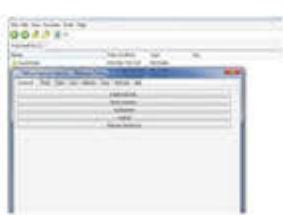
The program InViewer remembers the main tasks of a media viewer without unnecessary burden: The viewing and playback of photos, music or video files in various formats such as JPG, MP2 or AVI. You can also rename or convert the files into another format like TIF, BMP or PNG.



Tablacus Explorer

Operating System: Win XP/Vista/7/8

One of the largest shortcomings of Windows Explorer is its lack of adaptability to the user. With Tablacus Explorer, you will always have a good alternative at hand. The big advantage: You need not install the program but only start one of the two EXE files from the zip archive after you have extracted them.



Freeciv

Operating System: Win XP/Vista/7/8

The popular boardgame Civilisations is a classic and with the large number of variants on the PC platform, it goes to show how immense it is on the tactical boardgame category. Now you can appreciate this game on your own PC with Freeciv. Each round allows you to think and save your strategy for the best possible play.



Aomei Partition Assistant S.E

Operating System: Win XP/Vista/7/8

The creation and changing of partitions is everything but easy as it uses the Windows on-board resources. Aomei Partition Assistant helps in various operations such as copying of disks or entire partitions as well as deletion. The overall overview is very easy for beginners.



PCMark 8

Operating System: Win7/8

If you want to know how to assess the hardware of your Windows Desktop, Notebook or Tablet, use PCMark 8. The benchmark tool has been created precisely for this purpose. After installation, you can choose between three test scenarios: Home, Creative and Work after which the results will follow.



Free Smartphone Manager 2.3.2

Operating System: Win XP/Vista/7/8

Irrespective of Android or iOS device: With the Apowersoft Smartphone Manager, you can easily manage almost any device, be it Android smartphones or tablets, even wirelessly. Thus, you can synchronise the photos from your smartphone with your PC at lightning speed and in return, store latest songs on your mobile.



fx-Calc

Operating System: Win XP/Vista/7/8

There are times when your standard features on a Windows computer are insufficient and when the requirements go beyond basic computing, this is where the fx-Calc becomes the perfect tool for the job. This tool aids you in solving complex computations and equations as well as their graphical representation.



HDD Guardian

Operating System: Win XP/Vista/7/8

The sleek tool monitors and controls the S.M.A.R.T values of your HDD and SSD under Windows 7 and 8. In the new version, the identification of virtual drives has been improved and the output of the error log has been reworked.



Letters

Letter of the Month



Kingston DataTraveler SE9 G2 3.0 16GB

10 is the Number To Beat

Dear CHIP,

I'm writing in with great interest after reading your feature about the differences between Windows 7, 8 and the upcoming Windows 10 operating system. I'm currently using Windows 8 myself, and am admittedly one of the users who have scorned it for being too different compared to previous versions of the Microsoft operating system.

Windows 10 looks to be the future of course, what with all the cool new features being added to just improve usability for the users. I'm definitely looking forward to what Microsoft has in store soon, and I'm pretty sure I'll be one of many who will be taking advantage of the free upgrade from Windows 8.

Ramesh Raj

Dear Ramesh,

Windows 8 definitely did get a lot of slack in the beginning when it went live. But to us, we consider this sort of issue as growing pains, and after some time, it was quite easy and straight forward to use. That being said, the operating system is definitely a lot more optimised for touch screen notebooks and computers rather than the one that still uses the standard keyboard and mouse in our opinion, and Windows 10 looks like it's about to fix that particular conundrum.

Like you, we're also looking forward to the new operating system. Project Spartan, Continuum and Siri on Windows are just some of the things we can't wait to try out when it goes retail.

Write to us at letters@chip.com.my. Alternatively, log on to the forums at forum.chip.com.my and make yourself heard! The Letters page is an outlet for you to voice your views and opinions towards the magazine as well as general tech trends. Feedback sent to us may be edited for suitability without altering the intended point-of-view. The monthly winners for LoTM will be contacted for further details.

Is Second Hand Advisable?

Dear CHIP,

With phone manufacturers now coming in to the country by the dozens, it's becoming really quite difficult to choose which phone to get which is the best bang for the buck. Of course, if one has a lot of money, they can simply opt to buy an iPhone 6 or the new Samsung Galaxy S6 off the shelves with no issues

What would be your advice for penny-pinching users who are looking for smartphones? Is going second-hand a good idea?

Ames Lee

Dear Ames,

Whilst grabbing second-hand high-end phones used to be a thing back in the heydays of smartphones, it's no longer necessary for you to do so any more. With companies like ASUS, Lenovo and Xiaomi all launching very affordable, yet very powerful smartphones, there is no reason for you not to buy a brand new smartphone off the shelves.

Smartphone technology has advanced quite a bit now to the point where price-point is determined mostly by brand and the choice of components that are being used in the build of the device. For a casual user, there are a lot of smartphones in the RM800-900 range that can easily fit your needs, and in some cases, there are also phones that are just as good that cost even less than that.

Wearables For The Future

Dear CHIP,

Ever since they were announced, I've fallen in love with wearables and fitness trackers. Reading your article about them has opened my eyes quite a bit, as it delves into both the positives and negatives of using a fitness tracker extensively. Leading an active lifestyle, I love being able to see how far I've run, cycled and swam, and check on things like burned calories and such. Seeing all these numbers fills me with a sense of achievement, and the high I get from it is simply great.

Edward Chee

Dear Edward,

Wearables certainly have a lot of people hyped up, and whilst it certainly is being used mostly as a way to track fitness levels during high intensity activities right now, we're also very much looking forward to see it making an impact in other areas of the health industries. Eventually, we'll see wearables that can help patients recovering from a bout of heart attack, or athletes looking to get back on their feet, with doctors at their side to ensure a speedy and steady recovery.

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Available in stores now. Find out more, visit samsung.com/my

ASUS ZenFone 2 Officially Available in Malaysia

The hotly anticipated smartphone storms into the market with affordable pricing

It appears that Malaysians need not have to wait for long for ASUS Malaysia to bring in the much-anticipated ASUS ZenFone 2 smartphone to the country. The company held a big launch event where thousands of Malaysians from all walks of life crowded the KL Live venue to get their hands on the ASUS ZenFone 2.

In Jakarta, ASUS unveiled five different models of the ZenFone 2 that will hit the markets in the region, and ASUS Malaysia is happy to confirm that all five models will be making it to the country, ranging from the 5.0 inch ASUS ZenFone 2 ZE550CL, powered by a 1.6GHz Intel Atom Z2560 processor, 2GBs of RAM and 16GBs of storage, all the way to the highest end model, the 5.5 inch ZE551ML, running a 2.3GHz Intel Atom Z3850 processor, with 4GBs of RAM and 64GBs of storage space.

As if that's not all, ASUS Malaysia also announced that they will be bringing in all of the accessories and back covers that

were announced at the regional launch into Malaysia. This includes items such as the ZenPower power bank, the ZenFlash, as well as the LolliFlash.

According to representatives, the accessories will only be available sometime in June, at prices that will also be announced when they're finally available in the market.

Providing an incentive for customers to turn up early at the event, the first 100 pre-order customers also received a ZenPower power bank each, rated at 10,400mAh.

The ASUS ZenFone 2 can now be purchased at participating retail stores nationwide, with the 5.0 inch ASUS ZenFone 2 ZE550CL priced at RM559, the 5.5 inch ZE550ML with 1.8GHz processor, 2GBs of RAM and 16GBs of onboard storage for RM749, and the ZE551ML with 2GBs RAM and 32GBs storage for RM899. For the two 4GB RAM models, the one with 32GBs of storage goes for RM1,099, while

the unit with 64GBs of storage retails for RM1,299. 

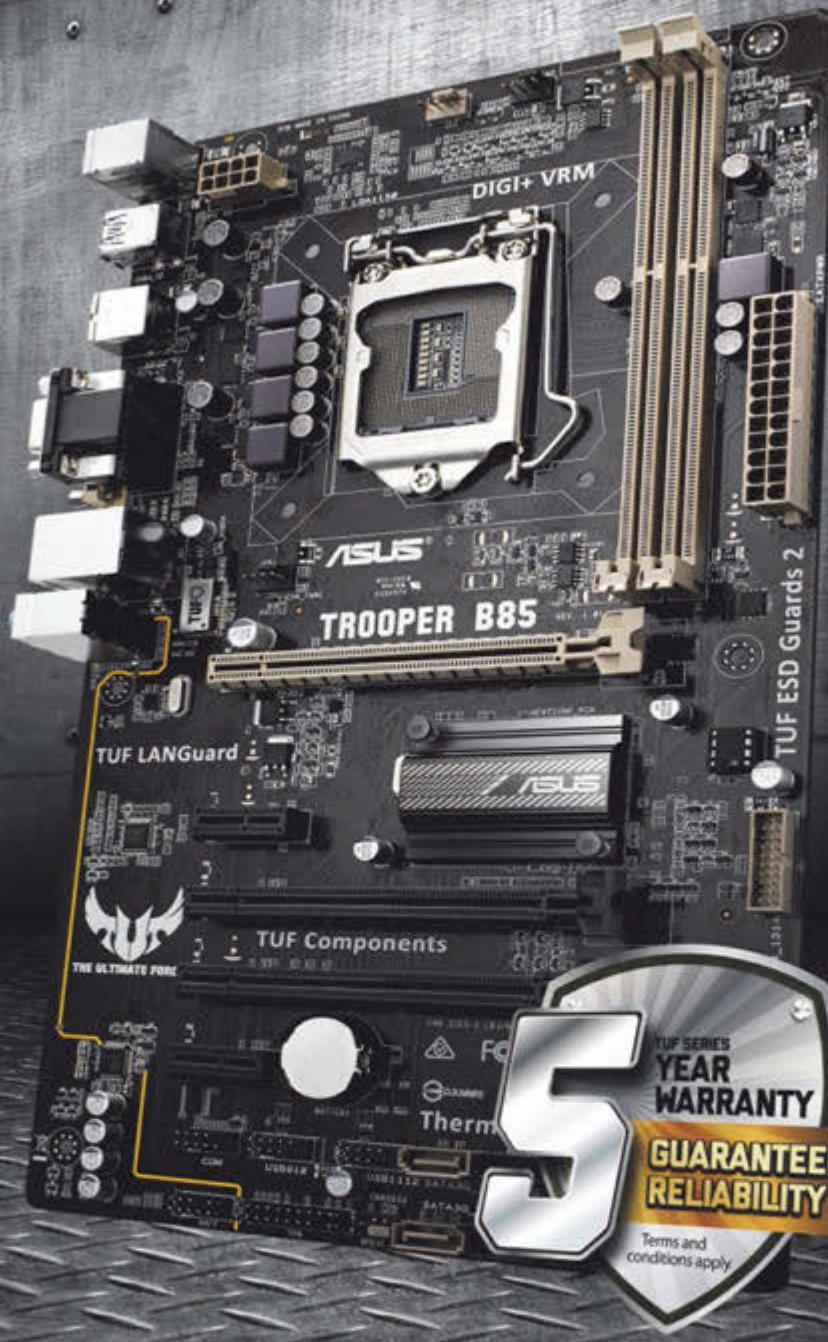
www.asus.com/my



Jimmy Lin, ASUS Malaysia Country Manager on stage at the Zen Day event



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Officiating the launch of the new Acer Concept Store is Mr. Ricky Tan, Managing Director of Acer Sales & Services Sdn. Bhd. (3rd from right) and Mr Darren Ryan Director of PC Category Management Microsoft APAC (2nd from right)

The Acer Concept Continues

Acer launched its latest Acer Concept Store at Quill City Mall earlier this month while concurrently launching the new Acer Aspire Switch 10 E

Acer Malaysia has officially opened its latest Acer Concept Store at Quill City Mall in Kuala Lumpur. Accompanying the launch was the latest Acer 2-in-1 laptop, the Acer Aspire Switch 10 E which was revealed at Acer's Global Press Conference in New York few days ago. The latest Acer Concept Store puts an emphasis on Acer's continuous dedication towards customers by providing further convenience through its large variety of hardware and peripherals and after sales service enhancement.

The award winning Acer Aspire Switch 10 E features the second

generation Acer Snap Hinge 2 with a guiding plane design for exceptionally smooth switching between its four different modes of laptop, tablet, display and tent. Through these seamless switching, coupled with its long battery life and other prominent features, the Acer Aspire 2-in-1 Switch 10 E is a great companion for productive work and fun play

Part of its unique style and design highlights on its sophisticated textile pattern on the top cover and underside which helps prevents scratches, while maintaining the stylish outlook and also delivering a better grip for easy



manoeuvrability. The New Aspire Switch 10 E comes in five new colours which are Moonstone White, Shark Grey, Peacock Blue, Magenta Pink and Coral Red. The Acer Aspire Switch 10E is priced at RM1,399(32GB +500GB) and RM1,099 (64GB). 

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Yelp Arrives in Malaysia with Localised App

Bringing crowd-sourced eatery reviews to the local market

Yelp, a crowd-sourced social online directory service is finally available for use by Malaysians. The app, which launched at midnight last night, allows its users to find local businesses, and leave behind comments and reviews that can be helpful to others who might be looking for similar services around the area.

The service is meant to be used to check in and review a variety of businesses, but its primary usage has seen it become one of the most trusted review services for restaurants and cafes in countries that Yelp operates in.

Malaysia is the fourth Asian country

that Yelp has stepped into, with others including Japan, Taiwan and Singapore. Not only can Malaysians use the app to check in and review and comment on a variety of businesses, the app is also localised in Bahasa Malaysia. If your phone's language is set to BM, the app will be available to you in that language.

According to Miriam Warren, Yelp's Vice President of New Markets, the language is the 17th language to be added to the service's burgeoning list of supported languages.

"Malaysians have over 40 million mobile devices and the vast majority of the country uses social networks regularly.



"Given that they are so digitally savvy, we know they're going to love using Yelp to find great local businesses" said Miriam.

Not only that, Malaysians will also be happy to know that Yelp has added a special "sticker" for checking in into a local business here, and have also introduced two brand new categories that are unique to the Malaysian locale; "nasi lemak stalls" and "mamak restaurants".

While there are thousands of businesses that will be made available on Yelp, the service will also provide a platform to the business owners for free, allowing them to respond to constructive feedback and comments left by customers.

At the moment, Yelp is also looking to hire a community manager for Kuala Lumpur, to help the community of Yelpers here grow, as well as to organise events and act as a general point of contact for Yelp in the country. 

yelp.my

Ericsson's 50th Anniversary

Ericsson celebrated its 50th anniversary by opening a brand new office at Pinnacle at Sunway

Ericsson, a world leader in communications technology and services, recently celebrated its 50th Year Anniversary in Malaysia with the official launch of its brand new office location in The Pinnacle, Sunway.

Officiated by Yang Berhormat Dato' Sri Ahmad Shabery Cheek, Minister of Communication and Multimedia, the event was held to shine a spotlight on the company's pivotal role in the history of Malaysia's telecommunications and ICT industry since it first set up operations in 1965. Ericsson's first contract in Malaysia was to supply, install and commission Malaysia's first crossbar exchange, or electro mechanical switch, by Jabatan Telekom Malaysia, Ericsson has since seen tremendous growth within the country's

local industry.

In his speech, Yang Berhormat Dato' Sri Ahmad Shabery Cheek said, "The solutions and services Ericsson provides are able to assist the telecommunication operators in Malaysia to embark on a network transformation journey. We hope that through communication, people and society can be empowered to move forward. Technology has enabled us to stay connected with one another at anytime and anywhere without the concerns of physical boundaries. I am proud to say that Ericsson has played an important role to make this happen." 

www.ericsson.com



Yang Berhormat Dato' Sri Ahmad Shabery Cheek, Minister of Communications and Multimedia; His Excellency Mr Bengt G. Carlsson, Swedish Ambassador; Todd Ashton, President of Ericsson



Yang Berhormat Dato' Sri Ahmad Shabery Cheek, Minister of Communications and Multimedia during the plaque signing ceremony to officiate Ericsson's New Malaysian Office



MSI recommends Windows.

The Final Touch of Your Professional Look

It's more than just a powerful notebook.

It's the final piece that brings everything together and leads you to the career home run.



GE62 Apache Pro

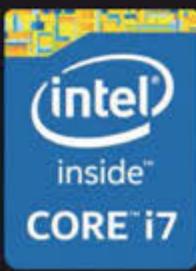


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Conferencing With Bosch

Bosch Security Systems introduces two new conference systems during its recent product launch at Aloft in KI Sentral

Bosch Security Systems has recently introduced two new conference systems – the CCS 1000D Digital Discussion System and DICENTIS Wireless Conference System, ideal for fixed and temporary meeting areas such as convention centres, government offices, boardrooms, conference rooms and parliament.

The CCS 1000 D Digital Discussion system delivers a way to easily manage meetings and is ideal for small to medium sized meeting areas such as a town hall, local business centres and courtrooms. The system is easy to install, use and is designed to encourage productive sessions. This is done through its advanced digital

audio processing that helps deliver amazing speech intelligibility. At its core, the Control Unit that powers the Discussion Devices which then is able to control cameras and interfaces with external equipment such as sound reinforcement or public address systems. Additionally, live video feed for active speakers can also be shown on the large screen. It supports up to six HD cameras which can be installed without additional software. This device also makes audio recording easy with its built-in MP3 recorder which makes it possible to record entire meeting sessions electronically and avoid manual recording, this system utilises Digital Acoustic Feedback Suppression to

reduce howling and feedback effect.

Moving on to the DICENTIS Wireless Conference System, this device utilises next generation technology, Wi-Fi, and smart wireless management for interference free conferencing. This system can be connected to any Android or Apple devices as well as laptops enabling users to tweak the audio and user settings directly from their own devices. It also has True Wireless connectivity which enables WAP with mobile devices without extra equipment. This device comes with a 4.3-inch capacitive touchscreen, a discrete high directive microphone, and a built-in NFC reader for identification purposes. 

www.boschsecurity.com

All Is MaxisOne

Maxis delivers better deals to its customers with the reveal of its latest offerings that includes Spotify Google Chromecast and the MaxisOne Share plan

Maxis recently unveiled three new offerings to their MaxisONE plan with the addition of free access to Spotify premium, freedom to watch anything from your device to any TV via Chromecast and the shared experience via MaxisONE Share plan.

With the launch of #MusicNow, you can listen to any song anytime for free. From today till July 31, Maxis is giving their customers free access and opportunity to enjoy unlimited streaming of Spotify Premium. This offering guarantees that there would be no ads, no restrictions, no fees and no data

charges. The minimum requirement only requires

you to sign with any 1GB and above Maxis or Hotlink mobile internet plan.

A Malaysian first was also witnessed today as Maxis was the first to market Chromecast in Malaysia. Through this device, you can now cast unlimited entertainment from your internet device to any TV with a HDMI port. This includes any YouTube channel, feature length movies, games, videos and photos. MaxisONE plan customers may



Morten Lundal, Maxis Chief Executive Officer and Dushyan Vaithianathan, Head of Consumer Business officiates the launch of the new MaxisOne propositions

purchase this device for only RM150 while those not on a Maxis plan can purchase it at RM 170.

Last but not least is the MaxisONE Share plan whereby you can now share unlimited talk and text as well as data with your loved ones. It is competitively priced at RM48 per line per month. 

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Spokespeople and fans proudly showcase the Honor 6 Plus to all attendees. From left to right (First three and last three persons are event ambassadors): Liu Kang, Allen An, Trozen Neo (Honor fan), Peter Tong, Wira Hidayat (Honor fan).

Smartphones With HONOR

Huawei's sub-brand brings in two new models to the Malaysian market

After setting up shop last April, Honor celebrated their one-year anniversary in Malaysia with the launch of two new smartphones here – the Honor 6 Plus and the Honor 4C. Themed 'Be Brave, Be Yourself', the celebration was joined by both media and Honor fans from all over Malaysia.

Abraham Liu, Chief Executive Officer, Huawei Technologies Malaysia said, "Today, the Honor brand celebrates its first milestone in the country, and we would not have been able to achieve this success without the constant support by our fans and partners. For that, we humbly thank our Malaysian supporters - they are truly a group of enthusiastic people who dare to be bold. It is also because of them that we are proud to introduce the Honor 6 Plus and Honor 4C to the Malaysian community."

The Honor 6 Plus features flagship-class specs such as an ultra-thin 1.85mm frame with a 5.5-inch full HD LCD Corning Gorilla

Glass 3 screen, 3GB RAM, 32GB ROM capacity, LTE Cat6, and also Huawei's own Kirin Chipset – the 8+1 cores Kirin925. For imaging the Honor 6 Plus make do with a company first parallel dual-lens camera sensor that combines creates a 13 megapixel image output. This dual-sensor set-up is great for low-light photography. The Honor 6 Plus also feature a combo dualSIM system, with one of the SIM trays can be turned into a microSD tray for memory expansion.

Meanwhile the Honor 4C is equipped with a 1.2GHz Octacore CPU, 2GB RAM, and 5MP front camera, the Honor 4C is an exceptional upgrade from the Honor 3C, which targets consumers that want a fast performance smartphone within an affordable price range.

Also at the celebration, Honor announced that they are tying up with 7-Eleven for MOL payments, for orders made through their e-store – vmall.my. Customers can make their order online,



Honor 4X



Honor 6 Plus

and head to their nearest 7-Eleven outlet for payment. No need for credit cards.

The Honor 6 Plus is now available, with a retail price of RM 1,399m while the Honor 4C is tagged at RM 529.

www.vmall.my



12+ MODELS

USB 3.1
2X FASTER

AVAILABLE ON MSI® Z97A / X99A / 990FXA / 970A

THE POWER OF USB 3.1

With the advent of USB 3.1, faster transfer speeds between your device and your computer is upon us. With just one cable, your data transfer is now a literal plug and play affair. Time measured for you to wait for your transfer to be completed will now be measured in seconds, rather than minutes.

High Speed Transfers

USB 3.1 allows for high speed data transfers – thanks to the ASMedia ASM1352R controller which connects to the Z97/X99 PCH over PCI-Express 2.0 x2, delivers up to two times faster data rates than USB 3.0, with speeds up to 10 Gbps, making it faster than a regular SATA 6 Gbps connection. Transferring your favourite games, music and movies over USB has never been faster.



gives support for future expansion and products that uses the new cable type. The Type C also means that days of guessing which side is up for your USB device's cable is no more – you just plug in, and you are set.

Complete Family Range

As a pioneer in many products, MSI is proud to bring to the market, the world's first motherboards with USB 3.1 built-in on board throughout its line-up. 10 different models using X99 and Z97 chipsets from MSI, and the models that features the new USB connectivity option include:

X99A GAMING 9 ACK	X99A SLI Krait Edition
X99A GAMING 7	X99A SLI PLUS
X99A XPOWER AC	X99A RAIDER
X99A MPOWER	Z97A GAMING 9 ACK
Z97A GAMING 7	Z97A GAMING 6
990FXA GAMING	970A SLI Krait Edition

Reversible Connectors

Two types of connectors for USB 3.1 is available – the legacy Type A, and the new reversible Type C. The former allows backwards compatibility with older devices, while the latter

Legendary Gaming with X99A GAMING 9 ACK

The X99A GAMING 9 ACK is an honoree of COMPUTEX 2015 Best Choice Golden Award, represents the best of the best for gamers. With support for the Intel Core i7 processors Extreme Edition in LGA 2011-3 socket, the X99A GAMING 9 ACK features a list of great features such as Quad Channel DDR4-3333 support, USB 3.1, SATA III and M.2 Sata support on board, Audio Boost 2 for great audio quality while gaming, Killer Ethernet for better data throughput through your LAN, Guard-Pro for power efficiency and protection against surges, OC Genie 4 for one-click overclocking, both NVIDIA SLI & AMD Crossfire support, and an optimised Gaming Device Port, with triple-gold plated connectors for high polling rate gaming devices.



msi

BC
AWARD



Faisal (fourth from the left) with models and HTC representatives on stage with the new HTC One M9+

HTC One M9+ Lands in Malaysia

Flagship device for the masses – straight from Taiwan

The flagship smartphone competition is heating up as HTC has also announced its latest high-end device in the form of the HTC One M9+. First announced around Mobile World Congress this year, the new flagship device sees HTC combine its timeless unibody aluminium design with brand new components, embodying the company's philosophy to connect people to their passions and empower them in their own pursuit of brilliance.

"We are thrilled to bring the luxuriously-designed HTC One M9+ to our customers in Malaysia, said Faisal Siddqui, President of HTC South Asia. "The new HTC One M9+ delivers a combination of amazing imaging with the new and improved Duo Camera that we pioneered, a new K display for viewing brilliance, as well as exhilarating sound through the HTC BoomSound with Dolby Audio, and our latest Fingerprint sensor, giving our customers a peace of mind."

The HTC One M9+ features a 5.2 inch 2K display, with a resolution of 1,440x2,560

pixels. It is powered by a 2.2GHz MediaTek Helio X10 octa-core 64-bit processor, together with 3GBs of RAM and 32GBs of built-in storage space, which is expandable up to 2TB via a microSD card.

It runs Android 5.0 Lollipop, together with the new Sense 7.0 UI, which alongside a new skin, comes with the company's own EYE experience software, which helps users take truly creative shots with its rear-facing 20MP Duo camera and front-facing 4.0MP UltraPixel camera. It is equipped with the Refocus and Zoe tools, amongst others that ensure your photos are memorable.

Much like its previous iterations, the HTC One M9+ will also come with accessories such as the Dot View case, which adds a more retro personalization thanks to a host of new features and colour options. It now has a transparent back that protects the rear chassis, whilst allowing you to still see its beautiful and intricate design.

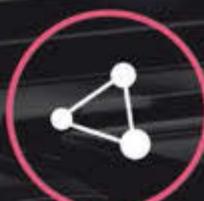
As far as availability goes, the HTC One M9+ will be available in Gold on Silver,



as well as Gunmetal Gray from today onwards, while the Gold on Gold variant will be made available at a later date. The recommended retail price of the HTC One M9+ is set at RM2,599, inclusive of GST.



www.htc.com



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Transformational technologies such as Big Data, Cloud Computing, Mobility and Social are among the most important technologies affecting today's CIOs. The CIO Leaders Summit Malaysia 2015 will provide senior IT professionals a unique opportunity to focus on key issues and challenges within the industry. The Summit is intended for CIOs to learn and interact with their peers through a series of professionally led sessions hosted by both international and local experts, allowing all attendees the opportunity to be informed by front line executives about the emerging technologies that are leading the way. The summit will highlight key challenges for CIOs through topics such as, Making the Most of Big Data, Cloud & Social Revolution and Managing Mobility in today's multi-platform digital age.

24 - 25 JUNE 2015
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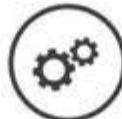
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Acer Gets AweSome

A series of new Acer offerings were launched recently and it contains three new smartphones under the Acer Liquid series as well as the latest Aspire E series laptops

Acer Malaysia has brought excitement to the market with the introduction of three new smartphones from the Acer Liquid smartphones and the new Aspire E series laptops. The new smartphones includes the attractive and lightweight Liquid Jade Z, Liquid Z520 and Liquid Z220. On the other side of the spectrum, the new Aspire E series laptops now come in four vibrant colours.

The Liquid Jade Z features a 13MP/F1.8 rear camera and a 5MP/F1.8 front camera which provides 20 percent more light to reach the sensor while the selfie conscious individual would enjoy the inclusion of Bright Magic Selfie and surround light

for the perfect photo at any time. It has a razor thin frame body that has in-cell high-resolution display and it also features Gorilla Glass 3. Additional features include Dual Shot Feature, Voice Camera Feature, Acer SnapNote and Acer Extend.

The Z series continues with the Liquid Z520 is an upgraded edition which provides touch-less selfie experience with a voice activated camera and up to 16GB internal storage that is supported by 2GB RAM.

The last Z series on display was the Liquid Z220 which features a 4-inch WVGA display and 3G Dual-SIM while also being the first Acer smartphone that incorporates the new Android 5.0 Lollipop. It has an

internal memory of 8GB backed by 1GB RAM. It is powered by a Qualcomm Dual-core Snapdragon 1.2GHz 200 Processor. It also features a rear 5MP auto focus camera which comes equipped with a flash and has an 89 degree view angle bundled with a 2MP front view camera.

The Aspire E series introduces two new models to our shores and they are the Aspire E14 and Aspire E15. These new devices comes in four unique colours to suit the difference in individual personality. The new Acer E series utilises the Qualcomm MU EFX MU-MIMO technology which delivers up to three times the wireless speed when compared to the 802.11ac wireless speeds. It is also Skype certified and provides users with a natural surround sound with the Acer True Harmony technology.

The price for the Acer Liquid Jade Z, Z520 and Z220 are RM799, RM499 and RM299 respectively, while the Acer E Series are priced at RM1,899 to RM 2,999. All of the devices mentioned above are already available at authorised Acer resellers. 

www.acer.com.my



From left: Johnson Seet, Head of Mobile Notebook & Smart Handheld with Jeffrey Lai Product Manager, Mobile & Smart Handheld posing with models during the Acer AweSome launch event



Seen on display was the Acer Liquid Jade Z, a new entry level smartphone which comes with an affordable performance



Theater Quality Sound in Your Pocket

Lenovo Introduces World's First Dolby Atmos-powered A7000 Smartphone in Malaysia

Some audio enthusiasts may argue that smartphone makers haven't been giving the audio side of things much love as of late, so cashing in on this niche, Lenovo Malaysia has just announced that the Lenovo A7000 smartphone, the first in the world to feature Dolby's Atmos audio technology in a mobile device.

Featuring a 5.5-inch HD (1,280x720) display, the A7000 is powered by a 1.5GHz octo-core MediaTek processor, and features 2GBs of RAM and 8GBs of built-in storage space, which can be expanded via a microSD card, up to 32GBs. It also runs Android 5.0 Lollipop, which is the latest Google mobile operating system available out there right now.

For users who have multiple numbers, they'll also be happy to know that the A7000 is a dual-SIM phone, which allows them to use two numbers all in one device, which is highly convenient especially for sales people and marketers on the move,

and coupled with a 2,900mAh battery, it is sure to last for quite a while, even during the most hardcore of usage.

"As the world's first smartphone featuring all-new Dolby Atmos technology, the Lenovo A7000 is built for entertainment at an affordable price range. Our partnership with Dolby delivers a responsive multimedia performer which promises a fulfilling user experience." Said Foo Mun Yee, Country Lead, Lenovo Smartphone, Malaysia.

Users will immediately hear the Dolby Atmos difference using headphones. Sounds of people, places, things and music become more vivid and move from all directions, including overhead, with excellent clarity, richness and depth. There is also a Dolby Atmos app built into the phone which allows you to adjust the audio quality to suit your preferences by adjusting the values on an equaliser.

Lenovo has also agreed on a limited-



The new Lenovo A7000

time exclusive deal with Lazada, which will see the online shopping portal have exclusive rights to the sale of the phone for six months from its planned date of sale, the 20th of May 2015. Customers who are interested in pre-ordering a Lenovo A7000 may do so by registering their interest on Lazada today onwards, and will be able to purchase the phone at a discounted fee.

The Lenovo A7000's original retail price is set at RM699, but if you get it from Lazada when it's available, you will be able to purchase it for a discounted price of RM625. It will be sold at authorised retailers nationwide when the exclusive period is over. 

www.lenovo.com.my

Three Is The Key Number

Microsoft brings in Surface 3 for Malaysian market

After the successful launch of the Surface Pro 3 – plus the popularity it gained in the market – Microsoft Malaysia has announced its sibling to the local market, the new Surface 3. It is the latest addition to the Surface family, and currently the lightest and thinnest in the family as well. Announced last March, the Surface 3 brings more options for local consumers.

“When we envisioned Surface all those years ago, we challenged ourselves with an ambitious goal – to

build a perfect product, a tablet that can replace your laptop. It wasn’t something we would achieve overnight and we couldn’t do it alone. So we went on that journey with our customers – listening and learning – and that desire to build something that people will love is what drives us. We are extremely thrilled with the enthusiastic response from Malaysia when we began our Surface journey in Malaysia – beginning with Surface RT and Pro in 2013, which continued with Surface 2 and our big hit Surface Pro 3 last year,” said Rukmani Subramaniam,

Chief Marketing and Operations Officer, Microsoft Malaysia.

The Surface 3 uses Intel’s latest x7 Atom quad core processor – the highest performing Atom processor right now. With a processing power of almost 85% to compare with the Intel Core i3 Surface Pro 3, it is also designed specifically for tablet use – striking the perfect balance between performance and battery life.

For the display, Microsoft opted to use a smaller version than the one used on the Surface Pro 3. While smaller, the 10.8 inch ClearType Full HD display is still as vibrant as ever, and it still includes both palm-detection and pen-detection technologies built in. Microsoft has also elected to put in two cameras – a 3.5 megapixel on the front and an 8 megapixel on the back – both capable to record 1080p videos.

Two versions will be available for consumers – a 64GB with 2GB of RAM, and 128GB with 4GB of RAM. The price for the former will be RM 1,989, and the latter is RM 2,389. Also launched along the two models are first party accessories for the Surface 3 – namely Type Covers (RM 479 in three colours – Black, Bright Blue and Red), Surface Pen (RM 189) and also the Surface 3 Dock (RM 769). 

www.microsoft.com.my



Rukmani and K.Raman, Managing Director, Microsoft Malaysia with the new Surface 3





Sony representatives with the new Bravia Android TV

A Bravia Line of Displays

New televisions from Sony promises a smarter viewing experience

Fans of the Bravia line of TV from Sony should rejoice, as their latest offerings are now in Malaysia, with models ranging from a simple 32 inch TV, all the way to the world's thinnest 4K LCD TV that features a 75 inch display.

The new televisions were built with the new 4K Processor X1, further advancing the clarity, colour accuracy and contrast of the Sony 4K viewing experience. The new models range in size from 43 to 75 inches and include four new series and nine new models. This includes the X9000C, which has a new ultra-thin floating style, making it Sony's thinnest range of TVs yet with edge-to-edge viewing.

There is also the W and R series Full HD televisions, with sizes ranging from 32 to 65 inches, giving customers more options to choose the ideal size. These televisions feature the X-Reality PRO which upscales picture quality and makes visuals appear so realistic on screen, to give a more real experience watching movies on screen.

A new feature introduced with the new television is the Android TV platform. Sony is the first manufacturer to bring the platform to customers in Malaysia. With Android TV, users can install apps from the Google Play Store directly onto the TV, and then easily stream content over the web via entertainment channels such as YouTube, or locally via the wireless connectivity built-into the televisions.

A new feature called One-Flick Entertainment meanwhile brings fresh and new ways to interact with the big screen. Simply flick through the remote to select favourite TV shows or videos, or browse content across nearly any source intuitively.

The new Bravia televisions are available right now, with sizes ranging from 32 inches to 75 inches, and prices ranging



A wide range of new Bravia models on display



Hey, we are on screen!

from RM 1,699 all the way to RM 39,999.



www.sony.com.my



Shaping the Next CIO

CIO Leaders Summit to outline challenges and upcoming technologies for companies

Media Corp International is proudly partnering with CHIP Malaysia for the 2015 CIO Leaders Summit Malaysia, taking place on June 24 – 25 at the Westin, Kuala Lumpur.

The Summit is invitation only and intended for Malaysia's leading CIO's and Heads of IT to gather together and discuss the current challenges facing the industry as well as the technologies that are leading the way. If you are interested in attending the Summit as a delegate, or are a sponsor with an innovative solution or product to offer, please register your interest here.

The CIO Leaders Summit Malaysia will address key themes, which are developed by our Advisory Board of key Chief Information Officers in Malaysia. These themes are a representation of the most pressing issues faced by the CIO's, which will be addressed over the course of the two days.

Speaker Highlights
Include:

Mohamed Azhan Dato' Muhammed Salleh, CIO, Proton who will present on: "The Internet of Things; Drastic or Step by Step Evolution?" This presentation will highlight key issues that include...

- Perspective of the Internet of Things in Malaysia
- Proton's in-house experience on M2M and Internet of Things
- Key Challenges for Automotive Industry in Malaysia

• Opportunity for Business Collaboration with Internet of Things

Additionally, Albert Koay, Global Group GM IT, Kuala Lumpur Kepong Bhd (KLKB) and Dato' Arif Siddiqui, Chief Information Officer & Group CIO Islamic Banking, Standard Chartered Bank will speak at the upcoming Summit.

For more information on the CIO Leaders Summit Malaysia, please visit: <http://www.cioleadersmalaysia.com>





Canon reps with the new products on stage

Two New Image Powerhouse From Canon Revealed

Canon announces the new EOS 750D and EOS 760D

Camera fans rejoice, as Canon has announced two new models as part of their DSLR line-up – the new EOS 750D and the EOS 760D. They also announced a new living-room based photo sharing solution – the Connect Station CS100.

“Photography has always been as much a social activity as it is a means of immortalising a precious moment in time. While imaging technologies have evolved tremendously over the years, the act and art of capturing a memorable image still retains its marvellous ability to bring people together,” said Wataru Nishioka, President & CEO Canon Marketing (Malaysia) Sdn Bhd. “We are very proud today to announce the arrival of two all new DSLRs as well as our very own Connect Station CS100 – products we hope will help amplify the power of photography to connect people.

The two new models comprises of the 750D – aimed at casual users, and

the 760D – aimed at a more enthusiast level consumer. The two camera is the company’s highest resolution shooter so far – with a 24.2 megapixel sensor under the hood. When paired with the latest DIGIC 6 image processor – it promises superb image quality with each shot. New in the camera are features such as the new Hybrid CMOS AF II System for sharp focussing in both normal and Live-view, HDR movie recording mode, MP4 recording option for smaller file size which is suitable for the net, and also built-in WiFi for wireless image transfers.

As a companion to the two cameras, Canon also announced the new Connect Station CS100. The Connect Station CS100 is a convenient one-stop platform for image sharing with friends and families. When connected to any modern television (TV) via HDMI cable, users will get to appreciate the fine and subtle details of a well-taken photograph as well as enjoy smooth playback of user-captured high



The 750D and 760D

bit-rate movies. With both WiFi and NFC connectivity – it can be accessed both via the camera through the Canon Image Gateway, or through the Canon app for the smartphone, or via any web browser.

The cameras are already available on the market, with prices as follows:

- EOS 760D (Body only) – RM2,899.00 (inclusive of 6% GST)
- EOS 760D (EFS18-135 IS STM) – RM4,399.00 (inclusive of 6% GST)
- EOS 750D (Body only) – RM2,599.00 (inclusive of 6% GST)
- EOS 750D (EFS 18-55 IS STM) – RM3,199.00 (inclusive of 6% GST)
- EOS 750D (EFS 18-135 IS STM) – RM4,099.00 (inclusive of 6% GST)

The Connect Station CS100 will be available from June 2015 onwards with the price to be announced later on.

www.canon.com.my

Gathering Footprint with Google

Project aims to add more web presence for businesses in Malaysia

In their bid to rope in more businesses online in Malaysia for better user experience while using Google Search and Google Maps, the company has embarked on a project called 'Footprint' in an effort to improve existing business information, correct inaccurate listings, and create listings for new businesses.

Google Malaysia has engaged the help of a local partner that has for the past year, added tens of thousands of business listings to Google Maps from the greater Kuala Lumpur area. These new listings are currently live on Google Search, Maps and Google+, and results in an easier way to search for businesses online, thanks to the

web presence.

The list of new listings includes businesses along public streets, commercial shoplots and shopping mall. The information collected includes name, address, phone number and working hours of a business, as well as its precise location. Photos of the storefront and the inside of the business are also taken, and this information is updated on Google within a few days.

The next phase of the project will start from May 18 until the end of September, where the walkers – equipped with a portable device – will comb the



streets of Penang, Ipoh and Johor Bahru to add more businesses online. www.google.com.my/business

Greeting 2015 LG Style

New products from LG completes

With over a decade of experience in Malaysia, LG celebrated their tenth year anniversary in Malaysia with the reveal of their latest range of audio visual products for 2015. With experience in groundbreaking innovation for the masses, LG is in the forefront of providing great products for the masses.

"It's great that LG is continuously growing since its establishment in 2005. The brand has evolved to become a household name in the country, in the area of consumer electronics. The introduction of new innovations today is a great occasion to mark LG's continuous commitment to enrich the lives of our customers," said David Oh, Managing Director, LG Malaysia.

Several new products were

introduced during the showcase - including LG's Super UHD TV series. A smart TV running WebOS 2.0, the TV features specifications such as 4K IPS (In-plane switching), Ultra Luminance technology for better colour range reproduction and Superior Sound system

LG also introduced their Curved OLED TV - with its curved screen and 4 Colour Pixel technology, with the curved screen giving a better immersive viewing experience.

Plus, The LG Music Flow takes centre stage at the announcement, with its multi-room wireless audio system being the star feature. With Google Cast



support, the Music Flow system allows Android, iOS, Mac, or Windows device to send their favourite music wirelessly to the Music Flow speakers.

For desk junkies - the new 29 inch LG Monitor is a dream come true, with crystal clear image reproduction thanks to the IPS display, and also the ability to show more on screen thanks to the 21:9 screen ratio, with a resolution of 2560 x 1080 pixels. www.lg.com/my

Data Worth Protecting

Hitachi Sunway Informations Systems has recently revealed the launch of their latest data centre facility located at The Pinnacle

Hitachi Sunway Information Systems Sdn. Bhd has unveiled its newest 5,000 sq ft data centre facility located at The Pinnacle Sunway yesterday. This third data centre is a symbol of Hitachi Sunway's bid to become a major data centre player within the South East Asia region. Together with the launch of their latest data centre, Hitachi Sunway has also announced the Recovery-as-a-service (RaaS) solution which is Malaysia's first subscription based managed services with near zero downtime under its data centre business.

Cheah Kok Hoong, Group CEO and

Director of Hitachi Sunway says. "Our investment in data centre as a fundamental infrastructure and ICT architecture, support Hitachi Sunway 'Cloud strategy. The new Pinnacle Sunway is well-equipped to deliver a complete range of data centre managed services to handle the demands of the Sunway Group, as well as local enterprises that prefer their data to be residing close to them.

One of the key features of the RaaS



Hitachi Sunway partners with Vision Solutions to offer 1st subscription-based RaaS (2)

solution leverages on the real-time application technology of Double Take Software by Vision Solutions. This is a first of a kind subscription model and it is designed for companies in ASEAN looking for a full scale and reliable protection without committing upfront capital investment and resources. 

www.hitachi.com.my

Microsoft Opens Store in Malaysia

Authorised reseller store marks first branded store in APAC

As a sign of their commitment to the Malaysian market, Microsoft Malaysia recently launched their first Microsoft Authorised reseller store in Malaysia – situated in Suria KLCC. This also marks the first of its kind in the Asia Pacific region.

The newly launched Microsoft Authorized Reseller Store in Malaysia will offer an assortment of best-in-class Microsoft products, including Windows Phones, Feature Phones, Surface devices as well as Windows, Microsoft Office 365 and more. The store will offer an extensive line-up of Microsoft as well as third-party accessories to cater to different needs of Malaysian customers. The Microsoft Store will also have a Live Experience Table to showcase how users can enjoy seamless integration across

multiple screens through Microsoft's devices, apps and services.

"Opening the first Microsoft Authorized Reseller store is a significant development for our business locally. It enables us to showcase the world class innovation that you have come to expect from Microsoft and be a space where Malaysians can visit and learn how to make the most of Microsoft technology," said Rukmani Subramanian, Chief Marketing & Operations Officer, Microsoft Malaysia.

"This very first retail transition from a Nokia branded store to Microsoft in Malaysia is a big leap for the Microsoft brand in terms of scaling up of our retail foot print and widens the ranging of Microsoft products and services," said Bruce Howe, General Manager,



From left to right: Rukmani Subramanian, Chief Marketing & Operations Officer, Microsoft Malaysia; Aaron Di Marco, Director Retail Operations, Microsoft Mobile Devices Global Retail, Mr. Bruce Howe, General Manager, Microsoft Mobile Devices - Sales for Malaysia, Singapore, and Brunei and Mr. Jorge Selvan, General Manager, Hello Station officiating the opening of the new store

Microsoft Mobile Devices Sales for Malaysia, Singapore, and Brunei.

In Malaysia, 38 retail outlets – 13 exclusive brand stores and 25 Microsoft Mobile Reseller stores – will get the look overhaul in the upcoming months. 

www.microsoft.com.my

Cooler Master Case Mod World Series Has Winners!

The best of the best were chosen as champions for this year's competition

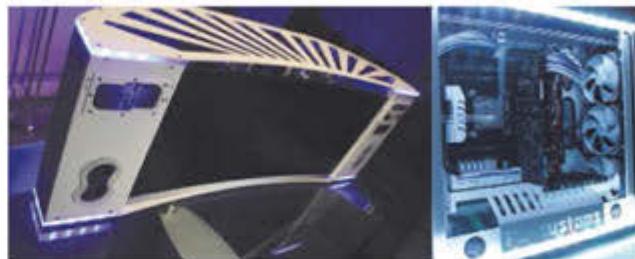
After a gruelling six months of hard work, buffing and modding, the Cooler Master Case Mod World Series is finally over. The votes has been tallied, and the winners has been crowned. Three different categories saw over a hundred different entries entered for the winning spot. Here are the winner's list for each category, with the runners up listed along.

Tower Mod

First Place:

Black Templars by Modder CROW

The modder modded his CM 690II and styled it to follow the Warhammer 40,000 look and feels, such as it won't look out of place in the tabletop gaming universe.



Rising Star

Kruper Dog by Maciel Barreto

At first glance you won't think that there is a computer in this build, but underneath all of the finely crafted details and miniature settings – lies a true blue performance PC.



Scratch Build

First Place:

Tri Max by Mike Petereyns

Creating an all-in-one PC is not hard, but making it look cool as Tri Max is not easy. Combining a high-spec machine with a 34" curved monitor results in a machine that is both stylish and powerful.

Runner Up:

The Dark Knight by Ail Abbas

Without any help from any CNC machines, Ail managed to create this one of a kind case mod, as a nod to Batman. With details that is usually made possible only with specialised machines, this case mod proves that anything is possible with just some elbow grease.



People's Choice:

Man of Steel by MegaSkot

With stainless steel as the major material, this Man of Steel inspired build combines the eponymous material with the crest of the House of El. A great build that combines design and performance in one.

mod.coolermaster.com

Store Everything With Sandisk Latest Products

First USB-C drives available for customers by quarter two

One of the big names of storage solutions, Sandisk is always in the forefront in offering the latest and greatest storage solutions for any and all platform in the market now. Recently they launched a whole slew of storage options to expand user's digital devices. It ranges from the largest microSD in the market, to the first USB-C connector USB drive. With 1.4 billion photos uploaded every day, storage is a much needed thing to own

For devices with microSD slots, the latest product from Sandisk is a great addition as they are introducing the latest Sandisk Ultra microSD - ranging from the biggest size available right now - 200GB,

to the latest Plus and Pro edition, with high speed read of up to 95Mbit/seconds. Introduced in MWC, the 200GB edition is currently the largest you can get for your device at the moment.

If you are on the iOS platform, there are no obvious way to expand your local storage - but with the new iXpand Flash Drive, iOS devices with Lightning connector can now enjoy bigger storage with sizes of up to 64GB on the go. Sandisk also introduced two new Dual Drive USB drives. One is an update to their Android USB On the Go (OTG) disk drive, which features two connectors in one device - a full USB connector on one side for PC



which runs on USB 3.0, while the other side is a microUSB connector for phones and/or tablets.

The other Dual Drive product released by Sandisk is the first dual-connector device that features the new USB Type-C connector. With storage up to 32GB available, it is a convenient solution to transfer data between devices.

The Dual Drive USB 3.0 and iXpand Flash Drive is available now, with prices starting from RM 39.

www.sandisk.com

Making a Leap for BlackBerry

Making a Leap for BlackBerry

To complement their enterprise portfolio, BlackBerry has released their latest addition in their line-up - the BlackBerry Leap. A mid-tier device aimed for customers who are focused both on their enterprise and consumer needs - the Leap brings together the security that BlackBerry is famous for, in a device that is not a burden to the budget.

With a focus to the startup market, the BlackBerry Leap combines a few features that aims to propel the user into high-gear productivity. The 5 inch screen features a HD screen for high resolution content viewing on the go. Underneath the screen lies a Qualcomm MSM 8960 processor running at 1.5 GHz. It is paired with 2GB of RAM and 16GB of storage, with a further 128GB can be added on via microSD slot.

Blackberry claims that the Leap can go up to 25 hour on a single battery charge, giving it a full day usage

capability. Plus, thanks to the BlackBerry 10 OS, it comes with the Blend unified communication platform, which allows remote communication with your data even if you are away from the phone. You are also ensured fast connectivity,



thanks to the 4G LTE radio built in.

The BlackBerry Leap is available from 20 May at a recommended retail price of RM 1,089.

www.blackberry.com



Damian Tay, Senior Director Product Management, APAC, BlackBerry with the new Leap

People & A Zetabyte of Data

Companies needs to be agile to take advantage of the wealth of data and digital natives

Business leaders admits that they are not ready for the digital future. A study titled "*The Information Generation: Transforming the Future, Today*" outlines the challenges that CEOs faces in regards to the new digital citizens.

The same leaders also said that they (96%) believe that new technologies have forever changed the rules of business, democratizing information and reshaping customer's expectations. The survey talked to over 3,000 top c-level individuals from 18 different countries, and revealed that the expectation level of the digital citizens are higher and more extensive than the generation before.

"In an increasingly connected, real-time world we live in now, consumers are demanding more from the organizations

they interact with. Because of this, business needs to be on their toe every step of the way," says Cheam Tat Inn, EMC Malaysia Managing Director."

"In Malaysia specifically, the smart device phenomenon is not new. Broadband penetration is high and the adoption of the smart devices shows no sign of slowing down. Moreover, according to reports by the International Telecommunication Union, Malaysia has the fourth largest proportion of Digital Natives in its population. These digital natives will be tomorrow's consumers, leaders and shakers. The impact of technology megatrends will only going to increase every year. For mature companies that are only now redefining themselves to fit into this new world – transformation



needs to be focused, purposeful and company-wide. This will be important for businesses to thrive in a hyper-competitive, hyper-connected world we live in now," he adds later.

As we reach 2020, it is expected that more than 7 billion people on at least 30 million devices will have generated over 44 zetabytes of data (1 zetabyte = 1 trillion gigabyte). Many business know that they should mine this wealth of data, only 51% says that they can turn the data into something that they can take advantage of. Hence the need of companies to adapt and evolve is greater today as the age of data overload looms upon us in the near future. 

www.emc.com

Strong Growth for Epson in Malaysia

Increase of sales across the board for the financial year of 2014

Epson announced that strong performance across all key business units in Malaysia helped drive overall FY2014 sales up 31 percent – more than double its growth rate compared to FY2013. Epson's robust performance was led by its projector segment with sales soaring 57% year-over-year driven primarily by growing demand for its business projectors. With a market share of 24.3 percent, Epson retains its pole position as the leading projector brand in Malaysia.

"Epson's growth momentum in Malaysia is a testament of our relentless commitment to creating value that exceeds customer expectations. Our strong FY2014 performance comes on the back of 14 consecutive months of over-achieving sales targets which

underscores the incremental appeal of our brand and products," said Shimizu Tomoya, Country Manager, Epson Malaysia

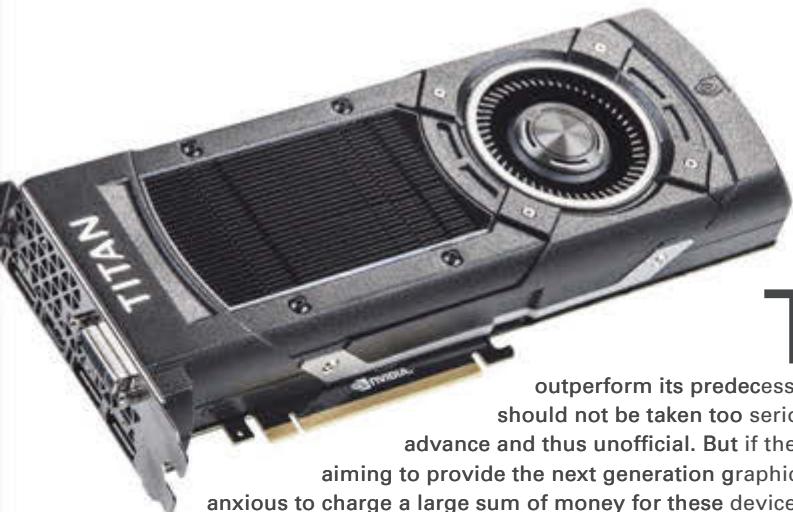
Key sectors that contributed to the increasing success of Epson's projectors in Malaysia include the flourishing education market. Amidst intensifying competition in the high yield printing segment as demand for low printing cost escalates, Epson's inkjet printers continue to deliver strong full-year

performance with sales rising 29% year-over-year. Epson's success in this market is due to the increasing popularity of its L-Series printers with sales jumping 37% year-over-year.

Going forward into 2015, Epson Malaysia plans to build on its growth traction in the business and commercial markets while maintaining its footprint in the entry-level and consumer market. "2014 was a year in which Epson's technology leadership and keen customer focus continued to be well-received across Malaysian markets. Whether it's interactivity for increased collaboration, better cost managements, improved efficiency and productivity or enhanced versatility for creative and novel business applications, Epson delivers," said Shimizu later on. 

www.epson.com.my

EPSON
EXCEED YOUR VISION



The New Generation

The latest nVidia Titan X has a supposedly 30 percent increase in performance when compared to the current top model, while AMD claims that the new Radeon R9 390X are able to outperform its predecessors by a whopping 50 to 60 percent. These figures however, should not be taken too seriously as they are mostly results born from benchmarks that ran in advance and thus unofficial. But if there is any common ground to be met, both nVidia and AMD are aiming to provide the next generation graphics card a huge bump in performance while manufacturers are anxious to charge a large sum of money for these devices. The high performance computing power of these new graphics card scales well with the growth of the gaming market as 4K resolution gaming comes to the fore and virtual reality is fast becoming a trend.

Consequently, nVidia developed the Maxwell architecture, which has been used for the second time (after the GTX 980) in the Titan X. The GPU now makes use of 3072 shader units, the GPU clock pulse has been reduced slightly, and the memory capacity has increased threefold, to 12 GB with a TDP of 250 watts, the power consumption has also increased considerably. AMD's device now features 4096 shader units, but the memory capacity has been left at 8 GB. Furthermore, a technical trick had to be used to ensure that this memory capacity is compatible with the printed circuit board, which features a standard layout and size. But as to which card is faster, a Chinese website has published benchmarks which show that the Radeon R9 390X has a slight lead over the Titan X. 

Apple And Google Plays Doctor

Apple and Google has recently unveiled new medical projects simultaneously whereby Apple presented an app called Research Kit, which has been integrated into the iOS. Users can make use of this app to voluntarily send the biological data collected by the smartphone to doctors. Google on the other hand is expanding the knowledge graph to include information boxes which deals with diseases and the information would not come from sites such as Wikipedia but with doctors collaborating on the search engine. 

WhatsApp Comes Calling

Some Android users may have already noticed the changes but WhatsApp has recently just integrated a new telephone service dubbed Calls into its messenger service. Thus far, only Android users have been able to enjoy this feature which allows them to forward calls to friends on their list of contacts thus allowing them to receive the Call feature. iOS users can expect the next update to include an end to end encryption system which bolsters the security for its messaging service. 

Windows 10 Uses Less Memory

Microsoft has explained that the Windows 10 will require significantly less memory space when compared to its previous versions. One of the main ways it reduces space is that the new operating system will compress the system files in such a way that it will occupy 45 percent less memory space. Additionally, the hidden partition space which takes up a few GB worth of space has been omitted altogether instead, the system files would be used as the recovery operation instead. An extreme example would be the 64-bit

Windows 10 would occupy 6.6GB less memory than the older operating systems. 



Adobe Introduces New Acrobat Software

Adobe is expanding its cloud-related range to include a PDF suite. The Document Cloud and the associated desktop and mobile apps are supposed to make it easier to read and edit PDF documents. Adobe's new PDF world is centered on Document Cloud, a central collection point for the documents. The new 'Acrobat DC' program and the 'Fill & Sign' app are supposed to facilitate electronic signatures on all devices. Furthermore, scanned documents can also be edited as PDF files. 

Nokia Here Comes to iOS

For the first time since 2013, Nokia's map app Here is once again available for iOS. The application makes it possible to download and use (even without an internet connection) maps from 150 countries. Furthermore, OPNV information is available for 950 cities, and real-time information is available for 40 countries. 

Fujitsu Showcases Futuristic Smartphones

Fujitsu has recently revealed two important next generation technologies for smartphones which are heatpipes which allow better heat dissipation thus allowing for more powerful CPUs and also a scanner which serves as an authentication device for the user which is presumed to be better than the previous fingerprint scanners. Both these technologies would be made available in 2016. 

Anki Overdrive, A Real Life Mario Kart

Thanks to Anki Drive, the market has been conquered by a spectacular gaming idea, which blends classical Carrera races with virtual Mario Kart elements. The cars are controlled via the smartphone. In the Smart Robot Car Racing Game, up to four cars rush across a single race track which is a high-tech plastic mat that is honeycombed with thousands of sensors. On the oval course, the cars run their laps with a great degree of autonomy. Thanks to the sensors, the vehicles always know where they are, and they constantly transmit this information to the smartphones and tablets that are connected to the system via Bluetooth. Each supercar is equipped with a 50-MHz computer and a camera. The vehicles scan their position on the track 500 times a second. The new version, i.e. Anki Overdrive, offers modular and magnetic course sections, which can be used to design new route variations. As we discovered during our initial tests, this makes the races even more exciting: The smartphone gestures frequently led to situations in which we accidentally deactivated the control device. 





Data Theft Of The Month

MAIL PROVIDERS HACKED: ONE BILLION ACCOUNTS ATTACKED

The US Ministry of Justice has recently announced that the biggest data theft in the history of the Internet has happened, where two Vietnamese and one Canadian hacker have supposedly stolen a billion email address records. According to the report, the hackers attacked eight different email providers between 2009 and 2012, swindling over 2.0 million USD by sending highly personalised spam mails.

UBER: 50,000 CUSTOMER DATA RECORDS LOST

Crowd-sourced taxi company Uber was recently robbed of data for 50,000 of its registered drivers. This information was made public by the company's legal advisor, who posted about it on her blog. As per the writing on the post, only drivers in the US are affected by this attack, which would also mean that their names and driving license IDs will soon be circulating around the net. According to the blogpost, the attack was also suspected to have been done in May 2014, but was only discovered in September that same year.

MANDARIN ORIENTAL: CREDIT CARD DATA SEIZED

The internal accounting system of posh hotel chain Mandarin Oriental was recently hacked into, and the attackers grabbed the credit card data of its customers. Security experts suspect that the hackers obtained access via manipulated card readers in the shops or restaurants of the hotels and not via their reception systems. At the moment, it is currently not known how many of its customers' data have been stolen.

FREAK Attack: Client Check

Good News! Your browser appears to be safe from the FREAK attack.

Chrome for Windows and all modern versions of Firefox are known to be safe. However, even if your browser is safe, certain adware programs, can expose you to the attack by intercepting TLS connections from the browser. If you are using a safe is a likely cause.

If you're curious, your client currently offers the following cipher suites:

Cipher Suite

```
TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256
TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA
TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA
TLS_DHE_RSA_WITH_AES_128_CBC_SHA
TLS_DHE_DSS_WITH_AES_128_CBC_SHA
```

xxxx

Millions of Websites Vulnerable to Attack

A new security loophole puts millions of websites around the world under jeopardy

In the 1990s, Bill Clinton, who was the president of the USA at the time decreed the use of two different crypto-procedures for US software manufacturers; a secure key-generator method for software inside the US, and another one which is not so secure, intended for software that is being shipped abroad.

20 years later, this decision appears to have bitten software makers, as hackers have recently found a weak spot, enabling them to use it to perform attacks via the widely-used SSL/TSL crypto-procedure that had been introduced by the US government all those years ago.

This compromises the HTTPS encryption of modern websites because

hackers can make these websites believe that the user's browser supports the old encryption. There are plenty of websites that support the old encryption.

Microsoft has confirmed that all versions of Internet Explorer in all Windows versions have been affected. Attacks are also possible on the standard browsers on Android and Apple devices. The weak spot has been named Freak Attack (Factoring Attack on RSA-EXPORT Keys).

Meanwhile, all big manufacturers have released a patch for their programs. As a result, an attack is no longer possible – at least on the client side because website operators too need to install updates on their servers to fix the bug.

Securing The Data Centre

Fortinet's new data centre and endpoint solutions protect Malaysian companies against threats

Fortinet is a very familiar name when it comes to high-performance cyber security solutions, and recently it has expanded its Advanced Threat Protection, which protects companies at every entry point into the network, from endpoint devices all the way to the data center.

The company announced improvements to its FortiClient solutions which enables devices under its solution to be protected, be they local, remote, stationary or even mobile. The new FortiGate 3000 high performance firewalls performance firewalls, ideally suited for top-of-rack

applications, help protect internal traffic and prevent threats from moving laterally within an organization's network. This multi-layered security approach is critical for identifying and thwarting today's highly sophisticated attacks that find ways to circumvent perimeter defenses.

Fortinet's extended ATP platform with its next-generation FortiClient solution meanwhile seamlessly integrate with FortiSandbox to quickly thwart threats entering at both on-network and off-network endpoint devices. 

Nasty Adware in The Google Play Store

Antivirus specialist Bitdefender has tracked adware apps in the Google PlayStore. Every time a user with an infected device enters a link, every search query and every clicked URL, the malware will guide the user to an ad

website, which shows location-based ads. Since the adware nests deep inside the system, the best way to remove it is to use an antivirus program. 

Hackers Steal Microsoft's SSL Certificate

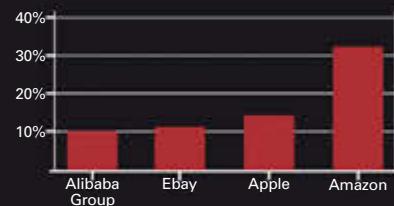
Cybercriminals have stolen an SSL certificate of the Finnish live domain of Microsoft. This has made it possible for the hackers to execute a Man-in-the-Middle attack and intercept secure web traffic between users and Microsoft. It is yet to be known how these hackers got their hands on the certificate. It is suspected that the hackers could register an email address on live.fi, whose name referred to an admin, for

example admin@live.fi. They could then get certificate issuer Comodo into issuing an authentic SSL certificate for the website, deceiving the network administrators at Comodo. Microsoft has already blocked the certificate and is sending an updated block-list to user computers via a Windows update. Other software manufacturers also intend to issue a similar certificate update. 



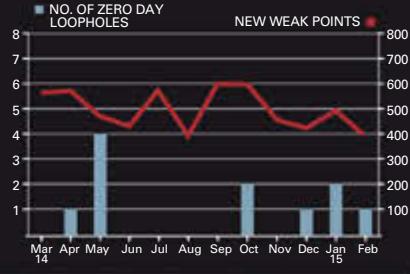
Amazon is the phishing favourite

A study conducted by Kaspersky shows that the Amazon brand was used the most for phishing attacks last year. Amazon, Apple and eBay together were the fabricated senders of 57 percent of the detected phishing mails. The attacks were primarily aimed at getting hold of credit card data.



The number of security loopholes declines slightly

According to Symantec's statistics, 400 weak spots have been found in February 2015 alone. But there was only one dangerous Zero-Day loophole.



Number of the Month:

1 billion

Number of email records stolen by hackers from eight different email providers since 2009 to 2012

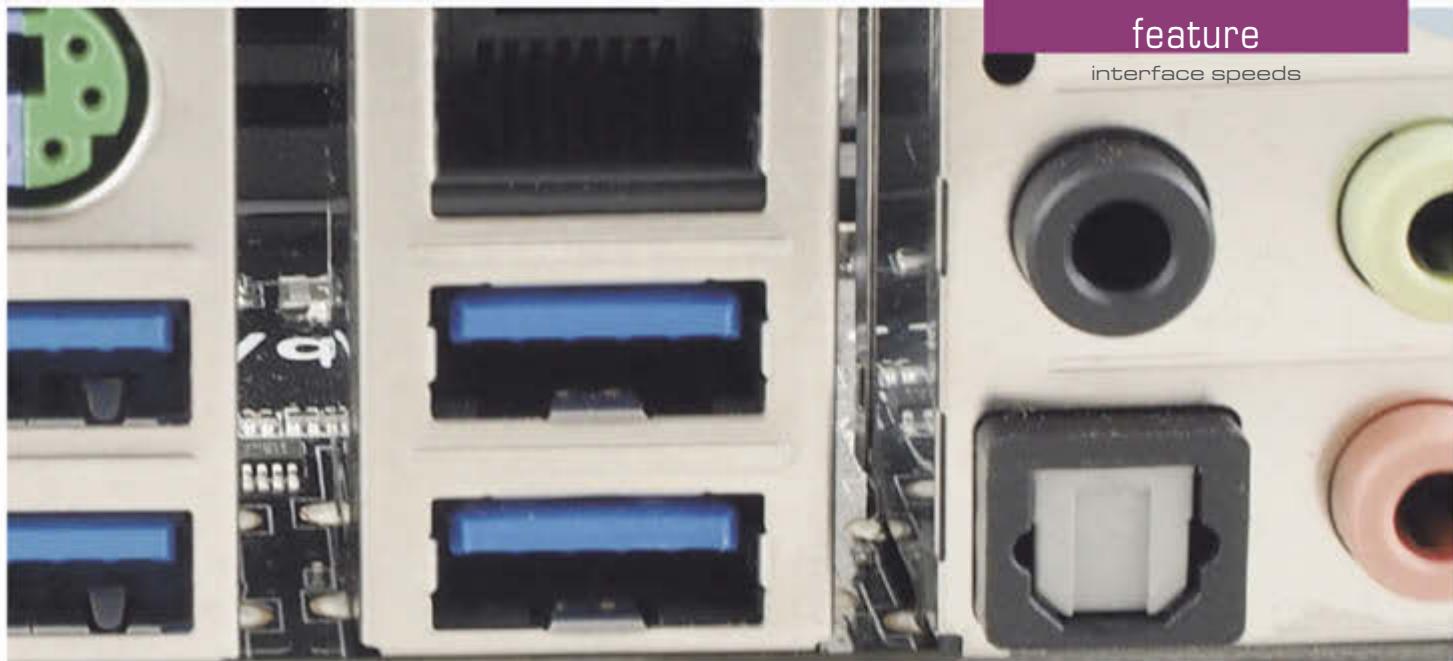


PHOTO: ISTOCKPHOTO/KICKIMAGES

Interface Speeds

Global data volume doubles every two years – this results in the ever increasing demands from digital interfaces *By Dominik Hayon*

External Interfaces

1995: FireWire 400	50 MB/s
1996: USB 1.0	1.5 MB/s
2007: FireWire S3200	400 MB/s
2013: USB 3.1	1,250 MB/s
2013: Thunderbolt 2	2,500 MB/s

Internal Interfaces

1989: ATA-1	8.3 MB/s
2000: Serial ATA 1.5	150 MB/s
2001: ATA/ATAPI-7	133 MB/s
2003: PCI Express 1.0	250 MB/s
2009: Serial ATA 6.0	600 MB/s
2016: PCI Express 4.0 (probably)	4,000 MB/s

Wireless Interfaces

1994: Infrared (IrDA 1.0)	0.014 MB/s
1997: WLAN (IEEE 802.11)	0.25 MB/s
1999: Bluetooth 1.0	0.09 MB/s
2006: NFC	0.05 MB/s
2009: Infrared (Giga-IR)	125 MB/s
2010: Bluetooth 4.0	3 MB/s
2013: WLAN (IEEE 802.11ac)	867 MB/s

Video Interfaces

1999: DVI	930 MB/s
2003: HDMI	495 MB/s
2009: DisplayPort 1.1	1,080 MB/s
2014: HDMI 2.0	1,800 MB/s
2014: DisplayPort 1.3	4,050 MB/s



Flying High With AirAsia ICT

Since the early days of the airline, AirAsia has been paving new grounds in terms of technology being used for their daily operations and especially their web service engine. We talked with Lau Kin Hoy, the Group Head of Innovations, Commercial and Technology for AirAsia to find out what makes the company tick and how technology is a core ingredient of their success

By Sharil Abdul Rahman

Can you tell us who are you and where are you in the group structure?

I'm the group head of ICT, Innovation commercial and technology. We work very closely with the business and marketing in AirAsia. In my unit, I have Product Managers for Mobile Space, Airport Solution, Airline systems and so on. Each of product managers heads for particular product. Each PM ensures each product are ahead in usage and development in practise. We spun off IT operations from the ICT department a couple of years ago. My side focuses on innovation for the group. We have a team of 80 in ICT currently.

How was the company IT infrastructure like when it first started in 2001?

AirAsia when we first started just has a basic IT dept. There was three of us – a desktop/IT guy, server/network guy and me as the CTO. Before taking on the role I was with another job – also with Tony Fernandes. I was out of the IT business actually before I joined AirAsia in 2002. At that time we were wearing many hats, doing multiple jobs at the same time. I did help out on the ground as I was still learning the ropes of the airline industry back then.

Can you share with us what engine are you using for the booking engine?

Initially, our booking engine was built by a third party. We have been using a booking engine from Navitaire called Open Skies (now called New Skies). When AirAsia started to give low fare tickets, our servers started to lock-up. Both due to the sheer numbers of connections to our server, and also the slow connection to Navitaire's server in Minneapolis. We had an IT manager initially, but Tony roped me in to help with the server. With Tony's idea for a low-cost travel and airline, we did bump into problems here and there.

Was it a big problem with connectivity in the early days?

No one knew back then about the connectivity required and also the bandwidth needed to fully run the server for AirAsia. Hence I stepped in to sort

things out. Within three to four months, we started to roll out new servers in our own server farms, subscribed to better bandwidth for our connections and managed bigger load than the first day of operation.

How do you guys develop your booking engine?

Thanks to New Skies, we have a basic booking engine for us to use for our booking engine. The basic engine development is done by the people at Navitaire, but at the same time AirAsia is also developing our own modules to be used in the booking engine. Modules such as seat booking, seat selection and such are the modules that is making the booking engine a bit more complex. I have a development team of about 10-15 people that develop the minor modules, while the Navitaire Professional Service, based in Manila, takes care of the core modules development.

What is AirAsia's current sales engine running on?

We are currently using the new sale engine called Dotrez from Navitaire, which gives use more flexibility in terms of enhancing customer experience during ticket booking online, and to lessen the possibility for our guests to enter the dreaded 'Waiting Room'. We are seeing a projected increase of up to four times the speed to compare with our previous sales engine.

What technology are you guys using for your booking engine?

It is mainly based on Microsoft .Net, for the current New Skies platform. The previous Open Skies was running on the HP3000 platform.

What is AirAsia back-end infrastructure like?

We are not running a pure-cloud setup – at the same time, about 60-70% of our server capacities are currently residing on the cloud. We use a combination of Amazon AWS and Microsoft Azure for our booking webserver. Thanks to the flexibility of cloud services, we can deploy extra capacity when the need arises, and not incur high cost by doing that. This migration was done about a year ago. Our operations servers are

still running on our own servers, but a big chunk of our operations servers are already virtualised. Ultimately, I aim to bring all of servers on to the cloud.

What is the next step in development for the booking engine?

We are aiming to feature more personalised services for our guests, presented when they make their booking. Services such as express booking, solo seat sales without ancillaries and such are being evaluated for roll out in our system.

Is there any updates to your mobile app?

Our first mobile app was developed by a third party, but subsequently we moved to another company and the current version we decided to bring the app development internally. It was originally developed using Sencha, a mobile platform that allows us to develop once, and deploy it to multiple platforms. Currently we are starting development on our new apps, with each platforms getting their own native apps soon. The mobile app will be using API calls to take advantage of the mobile platform. We will have personalised experience for our guests with the new apps in the near future.

What is happening with the Wifi service at this point of time?

We do have Wifi on selected planes right now for the first phase. It is just a small number of planes, but we expect the rollout will be more vigorous with our first phase deployment. Right now it is



limited to messaging apps – WhatsApp, Wechat and Line – but eventually email and web services will be supported. We also will see the WiFi service to be used as our In Flight Entertainment (IFE) service provider.

What else is coming from AirAsia?

We are focusing on the self-service angle – and how it can be used as enhancing the guest experience the moment they step into the airport. Several initiative is currently in trial periods. In Johor Senai Airport, you can now do self-luggage drop at the counter called auto-bagdrop. We also introduced a self-print luggage tag service, where guests can straight print their luggage tag at home without the need to visit our check-in booths.

We are also looking for ways to further enhance our engagement with our guests. Technologies such as RFID tags and iBeacon are being studied to see if it can help us help AirAsia guests, at the moment they step their foot in the airport, until they reach their destination.



www.airasia.com





MSC Malaysia Status for Startups



Startups has always been a grey area in the entrepreneur of Malaysia. Now with MSC's third tier classification, it is no longer.

By Edwin Lee Yong Cieh

A practising lawyer specialising in telecommunications, media & technology law, Edwin is in a constant effort to educate users on the many legal happenings in the IT world

I was invited to speak at Tech In Asia Conference in Singapore in May 2015. Tech In Asia Conference is one of Asia's largest conferences organised for entrepreneurs, investors, media and friends in the technology and startup community across the region. The topic of my talk was "Startups and the Laws in Malaysia". The other 2 speakers speaking on the same panel were Warren Leow (Executive Director at MaGIC) and Ng Wan Peng (Chief Operating Officer at MDeC).

In line with the theme of the conference "Connecting Asia's Tech World", the conference brought more than 2,500 participants, 200 startups and 100 investors (mostly venture capital companies and angel investors) from all over the world to gather at one place. It was certainly an eye-opener event for me and I was thrilled to see so many innovative and promising startups coming up from all over Asia.

MaGIC (Malaysian Global Innovation and Creativity Centre) and MDeC (Multimedia Development Corporation of Malaysia)

shared about the work that these 2 government agencies have been doing in creating and promoting a vibrant and sustainable ecosystem for tech startups and ICT companies in Malaysia. MDeC manages the Multimedia Super Corridor (MSC) project, which aims to boost the ICT sector in Malaysia while MaGIC is entrusted to develop Malaysia's tech startup ecosystem, with the vision of making Malaysia the startup capital of Asia.

It was during the talk that MDeC announced that it was collaborating with MaGIC to launch a new programme called "MSC Malaysia for Startups". MDeC also receives support from some other major startups ecosystem players such as StartupMalaysia.org, the New Entrepreneurship Foundation (MyNEF), Cradle, Cyberview, National Incubator Network Association (NINA), 500 Startups, Technopreneur Association of Malaysia (TeAM) and Founder Institute (FI).

As we all know, MSC Malaysia was an initiative conceptualised and launched by the Malaysian government in 1996 to drive the growth and development of ICT industry in Malaysia. MSC Malaysia status offers multi-tiered incentives to ICT companies that develop or use multimedia and digital technologies to produce and enhance their products and services. It serves as recognition of world-class service and achievement, while opens access to a host of privileges granted by the Malaysian government to qualified business

entities.

So what is MSC Malaysia for Startups programme ("Programme") all about?

The Programme provides an alternative for startups to attain MSC Malaysia status without being tied to any location requirements (i.e. the startup does not have to be located in any of the MSC Malaysia Cybercities and Cybercentres). Prior to the Programme, MSC Malaysia status companies must be located in a designated premises within MSC Malaysia Cybercities/Cybercentres (Tier-1 Companies) or a commercial premises within MSC Malaysia Cybercities/Cybercentres (Tier-2 Companies) for them to enjoy the various incentives offered under the MSC Malaysia status. The Programme now creates a third category for MSC Malaysia status companies that are located outside of MSC Malaysia Cybercities/Cybercentres (Tier-3 Companies).

The Tier-3 Company status is the one that is designed for startups. One primary concern before the Programme was launched was that startups who wanted to enjoy MSC Malaysia status but cannot afford to move to a designated premises or a commercial premises within MSC Malaysia Cybercities/Cybercentres missed out from the MSC Malaysia status incentives. MDeC recognises that startups at different growth cycles have different needs and affordability. Bearing that in mind, MDeC therefore decided to launch the Programme for startups and it hopes that "the Programme will position Malaysia as the Entrepreneur Hub for Southeast Asia," said MDeC's CEO, Dato' Yasmin Mahmood.

For a startup to enjoy the incentives under the Programme, it must first apply for a MSC Malaysia status from MDeC. The Programme was launched on 12 May 2015 and it is only applicable to MSC Malaysia status companies approved from 1 January 2015 onwards.

MSC Malaysia status companies approved after 1 January 2015 and have not activated their pioneer status incentive are eligible to apply for Tier-3 Company status. A Tier-3 Company can apply to move up to Tier-1 or Tier-2 Company status after 5 years of pioneer status incentive or it can choose to remain as a Tier-3 Company as long as the company is still active. However, such company will be liable to the applicable taxation laws after 5 years of pioneer status incentive. In other words, the company will have to upgrade to Tier-1 or Tier-2 Company status in order for it to enjoy another 5 years of pioneer status incentive.

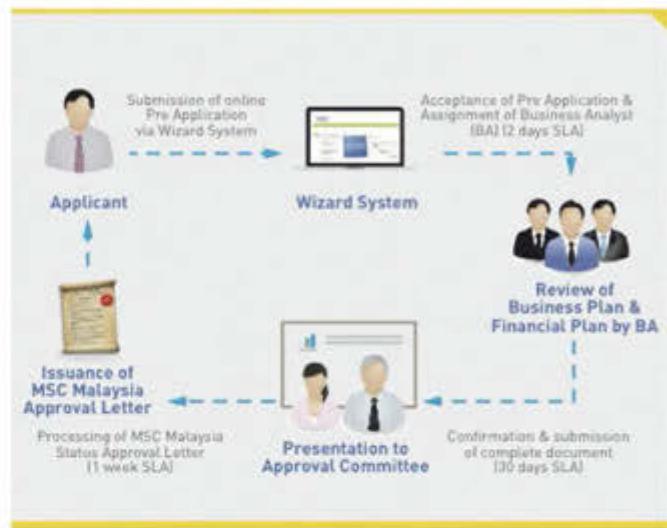
MSC Malaysia status companies approved prior to 1 January 2015 (i.e. Tier-1 or Tier-2 Companies) will still need to adhere to the location requirements as stated in their Conditions of Grant. If they move outside the designated location, it will be considered a breach of the Conditions of Grant. These companies are not eligible to migrate to Tier-3 Companies status and participate in the Programme but will continue to enjoy the full suite of incentives offered under MSC Malaysia status.

Some of the main incentives offered to Tier-3 Companies under the Programme are as follows:

- flexibility in choosing location of operation;
- ease of hiring foreign talents (they can hire up to 20 foreign knowledge workers in key positions);

- competitive financial incentives i.e. 70% tax exemption of statutory income for 5 years and no duties on the import of multimedia equipment;
- benefits such as networking opportunities, capability building programs and market access programs; and
- other MSC Malaysia Bill of Guarantees.

For a comparison of the different incentives offered to Tier 1-3 Companies, please refer to MDeC's website at <http://www.msccmalaysia.my/msc4startups/faq>. Chart 1 illustrates the application process for Tier-3 Company status.



Application Process for Tier-3 Company status

There are currently 3,600 MSC Malaysia status companies comprising global and local companies across multiple sectors. MDeC expects a further expansion of 8,000 potential ICT companies to participate in MSC Malaysia in the years to come.

"Technology is making the world borderless and advancing rapidly; if Malaysian entrepreneurs do not leverage it to grow and scale their ventures quickly, global competitors will take our market share away. We have the talent, resources and public/private support to do this. There is no reason why Malaysia cannot rise about ourselves on the global map," says Cheryl Yeoh, CEO of MaGIC.

The launch of the Programme indicates that the Malaysian government indeed recognises that tech startups has become the primary growth engine of the new economy. It is hoped that the Programme will take aspiring startups to the next level of growth to become regional and global players, innovation, productivity and quality of life as well as spur the growth of digital entrepreneurs and startups in this region. It is hoped that the Programme will take aspiring startups to the next level of growth to become regional and global players, increase and improve innovation, productivity and quality of life as well as spur the growth of digital entrepreneurs and startups in this region. 

The view expressed in this article is intended to provide a general guide to the subject matter and does not constitute professional legal advice. You are advised to seek proper legal advice for your specific situation.

Tech Spelunk

BMW i8

Green Driving

As the first true hybrid sports car, the BMW i8 bucks the trend by offering two different power plants in one car. This combi allows this high performance sports car to have the fuel consumption of a smaller compact car. Thanks to the plug-in Hybrid system, the BMW i8 can reach a rated consumption of 2.1 litres of petrol per 100 kilometres run. That is four bottles of soft drinks worth of petrol to travel from Kuala Lumpur to Malacca.



Speedster in Disguise

Even though it is a hybrid, don't be fooled by that concept. While it has an electric motor (rated at 131hp), it also has a petrol engine rated at 231 hp) which – when used in conjunction with the electric motor – can propel this car to almost super car speeds. How fast? How about 4.4 seconds to reach 100km/h. That is very fast indeed.



The notion that a hybrid car needs to be slow to be economical is a pervasive one – popularised by the current crop of hybrids currently on the road. While it may be true, BMW is challenging that notion with their latest four-wheel wonder that can now be purchased in Malaysia – the new BMW i8 Hybrid By CHIP Team

Futuristic Design

A low sports car silhouette gives the BMW i8 a very fast outward appearance. With a long wheelbase, short overhangs, and a solid status as it crouches on the street – the BMW i8 has all the characteristics of a full-blooded sports car in something that is green to the environment. It also features great design features such as suicide swing doors, LED lights as standard, and a very classically inspired interior that is both nice to look and very functional.



German Engineering

The BMW i8 achieves great performance thanks to the 50:50 weight distribution of the car. The electric motor sits on the front axle, while the petrol engine sits on the rear axle – achieving the said 50:50 weight distribution. The vehicle also has a particularly low centre of gravity, which enables extraordinarily high agility, excellent traction and directional stability in every driving situation.

Technological Marvel

BMW has made the i8 with an important criteria in mind – make it lightweight. Hence the use of carbon fibre reinforced plastic for the body panels, carbon fibre for the passenger cells and even aluminium screws and bolts to shave weight down. This is part of the new LifeDrive architecture, that consists of the Life module – an ultra-light passenger cell made of high-strength carbon, and the Drive module - the aluminium bodyshell, where the high-voltage battery and drive components live.



How Good Is The Apple Watch?

More than half a year after it was unveiled for the first time, it is now available at a steep price. The Apple's smartwatch - an initial review

By Christoph Sackmann

CON



Only 75 MBs for photos

The Apple Watch hardly has enough space for photos. There's space for max of 100

Gold made of ceramic

The gold version costs up to RM 62,000 (!) but it is largely made of ceramic.



Compulsory apps for all

Even without the Watch, iOS 8.2 still displays the companion app



68 %
of Americans do not want the watch

PRO



Apple Pay

Making payments with an NFC watch? It's a lot quicker than the process associated with an EC card



Top-notch third-party support

Armbands, apps, gadgets – External partners are already offering several accessories

Fitness functions

The Apple Watch is supposed to keep you fit – It keeps watch during your daily routine, when you're exercising and even when you're asleep



5 Mil
watches have been ordered by Apple from suppliers



A suite of sensors

NFC, a pulse monitor and an acceleration sensor – The Apple Watch really doesn't need anything else. It just uses the connected iPhone for GPS and call features

	PREREQUISITE From iPhone 5, iOS 8.2
	MARKET LAUNCH 24 April
	PRICE From USD 349 (1.5 inch) From USD 549 (1.65 inch) Up to USD 17,000

The best third-party apps

In addition to the five pre-installed Apple apps, there are also nine third-party apps for the Watch, including these three:



Shazam listens to music that's playing in the vicinity and tells you which song is currently being played.



Twitter is, with its short text, is perfectly suited for the Apple Watch screen. 140 characters fits nicely.



Nike+ collects movement data and uses it to create an activity profile, which contains rewards and social media connections



Quick Reply

In addition to telephone calls, SMS messages and e-mails can also be answered, thanks to Siri and the dynamically-generated auto-replies



Companion app

The Apple Watch requires a connected iPhone and iOS 8.2, which contains the companion app.

From 24 April onwards, millions of people throughout the world will rush into Apple's stores to buy an Apple Watch.

That's what the manufacturer is hoping, and if even a tiny percentage of the fans who are praising the new product on social media end up buying it, the manufacturer's dream will come true. Apple's first smartwatch went through a long developmental period, and the commercial launch of the product was a big success. What exactly will the customers get for their money?

Close to the wearer

One glance at the technical specifications of the watch is all it takes to realise that Apple has remained true to its distinctive style. The device contains elements that cannot be found in any other smartwatch – such as the NFC chip that makes it possible to make cash-less payments using Apple Pay. However, there are also elements that are missing that should have been part of the standard package. For example, the device cannot be connected to anything other than an iPhone. Also, the device does not have a battery that can hold out for an entire day. The insider-blog 9to5Mac found out that the full-load tests conducted by Apple resulted in a minimum runtime of 2.5 hours, while the device can hold out for four hours in case of normal long-term use. Even if the display is not switched on at all, the Apple Watch has to head for the charging point after a maximum of two to three days. Just like the iPhone, the Apple Watch will usually have to be plugged in on a daily basis.

The device is connected to the iPhone via Bluetooth and WLAN. The Watch transfers calculations (such as the GPS-related calculations) to the smartphone, and it also serves as a remote control for music, telephones, SMS messages and e-mails. The fitness section is the most important software component of the Apple Watch: The watch gauges the activity of the wearer and supplies the collected data to the integrated and third-party apps. The user defines goals (e.g. 'I will walk 20,000 steps today'), and can even have his sleep patterns monitored – provided the watch is not being recharged. Nike+ is a third-party app that rewards the user for fitness goals that have been attained, and it also shares this information with the user's friends through Facebook and Twitter. Those who wish to do so can use the Research Kit that is integrated into iOS 8.2 to make their biological data available for medical research.

Heavy on the wallet

Apple is also remaining true to its philosophy in terms of the price of the device: The Apple Watch is expensive. The cheapest aluminium model – which features an OLED display with a 38-millimetre diagonal – will have a price tag of USD 349 (RM 1,256). The stainless steel version that has a 42-millimetre display will cost up to USD 999 (RM 3,549). The 'Edition' variant – which features a surface made of real gold and a ceramic body – costs a cool USD 17,000 (RM 61,160). Even in case of the luxury version, an iPhone is not included in the price. The prices prove that Apple isn't even trying to compete with products such as Motorola's Moto 360 or Sony's Smartwatch. Apple's product is designed for watch-lovers who are not afraid of four-digit or five-digit prices. However, Apple's strategists must know that a smartwatch can never attain the stable value of a Breitling or a Panerai, which have been sold at prices exceeding the original price for several decades. Even the Edition will abruptly become unattractive when the Apple Watch 2 is released.

Conclusion

Although the Apple Watch will definitely become the largest-selling smartwatch, it's not a revolutionary product like the iPhone.



What is a SIM Hack?

For years, NSA and GCHQ have been infiltrating the biggest manufacturer of SIM cards. Ever since this matter has become a public matter, manufacturers and experts are fighting over the real extent of this secret service affair

By Moritz Jaeger

For years, the British secret service GCHQ and its allies have been infiltrating SIM card manufacturer Gemalto and gaining access to sensitive information. This fact is substantiated by the documents from the collection of the American whistleblower Edward Snowden, which have been recently published by the magazine "The Intercept". A presentation published by "The Intercept" states, "[We have] successfully implemented several machines and we think that we have the complete [Gemalto-, editor's note] network under control". The infiltration is widespread - in addition to billing and sales systems access, the secret service has gained access to the authentication server and the so-called K, Ki and OTA keys. With the help of this information, spies can monitor mobile communication without having to call in a manufacturer or a mobile phone provider.

This means that the services no longer need a judicial reason to sneak around, and they also don't leave behind any traces that could prove a case of misuse. The extent of the attack becomes clear when one takes a closer look at the SIM card market. SIM cards are not produced by mobile phone providers but by a few companies. The French-Dutch company Gemalto is the worldwide market leader in manufacturing SIM cards, while SIM cards made

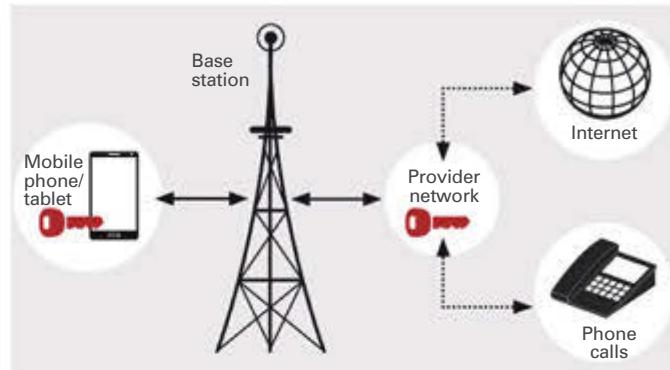
by the German company Giesecke & Devrient are widely used in Germany. Those who use mobile phones definitely use SIM cards made by them. So it is all the more alarming that the disclosure took these manufacturers completely by surprise; Gemalto, as quoted in the Intercept article, "had no indications that its network is compromised".

In a subsequent press release, the attack was classified as "likely to have happened"; but the company downplayed the impact of the attack. According to the company, "a large-scale theft of SIM encryption information was not possible". It also states that "since 2010, they have been using a new, secure method for distributing the keys to mobile phone providers, which can be hacked only in exceptional cases". Plus, some of the facts were not true; for example, Gemalto has business relations with only some of the mentioned mobile providers.

Experts doubt whether it was possible to investigate the incident comprehensively because the company published its statement very soon (within a few days of coming to know of the attack). Giesecke & Devrient also placates itself. It told CHIP that "There are no indications that G&D has been affected by the attack." Stefan Auerbach, Head of Mobile Security at G&D has said

Encryption between the mobile end device and the infrastructure of the provider

The encryption information is stored in the SIM and the so-called core network provider. It protects communication between the end device and the mobile phone provider. If the encryption keys are known, the communication can be read in clear text with minimum effort, end devices can be faked or cloned and espionage software can be installed.



that they have examined their systems and found no signs of such an attack. Mobile phone providers Telekom and Vodafone are tight-lipped. "Vodafone [has] already implemented its own encryption algorithm as a second firewall on Gemalto cards since years. After consultation with Gemalto, there are no indications that the encryption has been attacked or hacked", says the public relations department of Vodafone. At Telekom, people are more sceptical. They too have integrated additional security measures and currently believe that these measures have not been compromised. "However, we cannot completely rule out the possibility" – in response to CHIP's questioning. Currently none of the providers want to exchange the impacted SIM cards.

2G encryption is outdated

The dealings of the secret service throws light on the security of mobile communication, and of 2G connections in particular - i.e. mobile calls. Originally, SIM cards were supposed to be used for accounting purposes. It is only after the mobile phone boom in the mid 90s that encryption started being used. As is often the case in such matters, the encryption is hopelessly outdated. As early as in 2010 at the Defcon hacker fair, security expert Chris Paget had demonstrated how one can tamper with GSM and 2G security in devices worth about 1000 US dollars (~RM3700). For this, the end devices need to connect to manipulated base stations, and this could leave behind traces. More modern transmission technologies such as 3G or 4G/LTE provide better security but this too can be tampered with; the radio spectrum used by transmission technologies can be made to surge with the help of so-called "Jammers". Most end devices then switch back to the 2G mode – the user's communication can now be hacked again.

However after the attack, there is uncertainty about how secure the encryption of modern transmission standards is. Although Gemalto claims that the 3G and 4G keys have not been compromised, external specialists like cryptography expert Matthew Green for instance have urged users to be careful through "The Intercept". "No encryption mechanism remains safe after a theft. Gemalto is either sure that no other keys were stolen or is presuming that the additional security mechanisms cannot be hacked by GCHQ with the help of the NSA". Even after it came to know of the attack, Gemalto has not planned any legal steps. The CEO Oliver Piou said that "it is difficult to substantiate the conclusions", which is why he sees no basis for legal action.

We reached out to the local telcos in Malaysia on this matter. Digi replied, "The global SIM manufacturer, Gemalto, did supply SIM cards to Digi in the past as it is one of the largest SIM providers in the world. Based on their initial investigation, Gemalto has assured us that there was no breach in their systems that could affect the security and safety features of their SIMs. We wish to assure you that Digi's security measures are in place to protect our customers' personal information."

Therefore, as a user, one has to fend for oneself against such snooping. A secure end-to-end encryption can be acquired using some technologies and apps. "The security risk cannot impact applications that use encryption", says Jeremy Linden from the security company Lookout. As a logical step, he urges people to use more powerful encryption in software, services and apps. Just like Edward Snowden.

"Theft of encryption information was not possible"

From the internal investigation report of Gemalto dated 25th February 2015

"We cannot completely rule out the possibility of an incident."

Alexia Sailer, spokeswoman, Deutsche Telekom

What can SIM cards do?

SIM cards store user data, offer specific provider functions and enable encryption. This makes them an appeal target for spies and criminals.

SIM cards were first used in 1991. The first 300 SIMs were produced by Giesecke & Devrient for the Finnish provider Radiolinja. Since then, the cards (available in five models - Normal, Mini, Micro, Nano or Embedded) have been authorising connections to the mobile phone network. The SIM was originally developed to ensure accurate accounting. During several expansion stages, more functions were added to the cards. They now provide cryptographic keys for encryption functions, allow installation of applications of the mobile phone provider, or facilitate communication between machines (M2M). If one has access to the keys of the installed SIM card, one can not only infiltrate private end devices such as mobile phones or cars but also industrial applications that make use of mobile phone technology for communication.



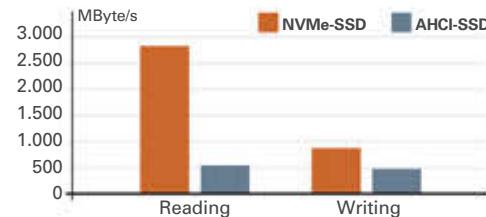
NVM Express

The NVM Express (NVMe) interface dramatically enhances the performance of Flash memories. Towards that end, a new controller like Marvell's 88NV1140 (which is compatible with NVMe commands) needs to be installed in SSDs.

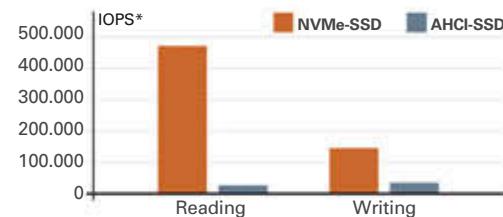
Speed comparison of the SSD interfaces

Compared to a very good AHCI SSD like Samsung's 850 Pro, Intel's NVMe prototype attains higher transfer rates **1** and performs several times more I/O operations **2** per second.

1 SEQUENTIAL READING AND WRITING



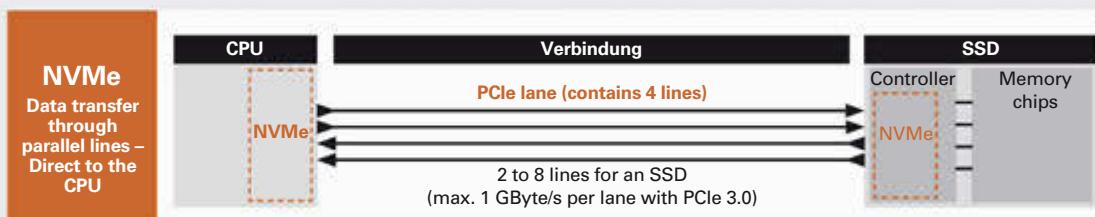
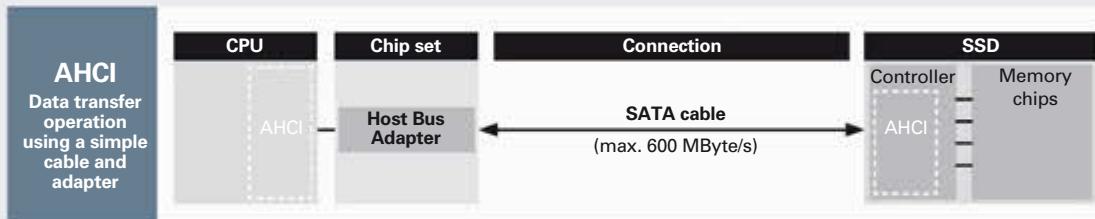
2 DISTRIBUTED READING AND WRITING (4-KB BLOCKS)



* Input/Output operations per sec

Direct line from memory to CPU

NVM Express was designed specifically for SSDs. The data flow is a direct stream, and the data flows in parallel – via several PCIe lines – from the memory chips to the CPU, through the SSD controller. AHCI is optimised for slow magnetic disks - an adapter facilitates the synchronisation of the data transfer via a SATA line, which turns out to be a data bottleneck for SSDs.



Comparing NVM Express and AHCI

Unlike AHCI, NVMe is optimised for the parallel PCIe data transfer associated with a multi-core CPU. Each core implements the save and read commands in its queue separately. This shortens the response time and speeds up the transfer of data.

Interface	AHCI	NVM EXPRESS
SSD connection	Chip set	CPU
Data transfer	Half-duplex: Data flows in both directions on an alternate basis	Full duplex: Data is transferred simultaneously in both directions
Latency (minimum response time)	6 microseconds	2.8 microseconds
Multi-core support	Conditional	Full
Parallelisation for data transfer	Requires constant synchronisation of the CPU cores for implementation of the save commands	No synchronisation required, each core communicates separately with the SSD controller
Maximum number of I/O queues	1	65.536
Commands per I/O queue	32	65.536
Memory accesses necessary per command (uncacheable register access)	6 for command without queue, 9 for command in a queue	2
Message signalled interrupt (initiate disruption of the CPU processing)	Supports only 1 interrupt	Supports up to 2048 interrupts



SSDs with NVMe – like Intel's DC P3700 – are already available for use in conjunction with a server. The P3700 reads and writes at the rate of 2.8 GByte/s and 1.9 GByte/s, respectively.

New Interface for Turbocharging SSDs

SATA cables and the AHCI interface is SSD's current bottleneck. NVMe Express are about to show everyone just how fast Flash can be

By Markus Mandau

Solid state drives are the new must haves. Those who want to speed up their system can simply buy an SSD and use it as the system drive. What is not well known is the fact that the Flash memory that is installed in SSDs could be a lot faster if it had not been connected to the CPU via SATA as it reduces the data speed to 600 MB/s. Furthermore, the Advanced Host Controller Interface (AHCI) involves the need to rely on a standard that ignores all the PC-related developments that have taken place in the last decade. It was conceived in 2004, back when magnetic disks were booming, and is designed for a memory type that magnetises or reads individual bits on a metal disk.

In case of AHCI, the hard drive controller does not directly send the data to the CPU. The data makes a detour via a host bus adapter (AHCI HBA) in the chip set. This host bus adapter is supposed to synchronise the transfer of data between the fast CPU and the RAM, and the slow disk. SSDs can make do without it. They need an interface that communicates directly with the CPU, and which sends data in parallel through multiple lines without being subjected to a speed limit. AHCI became de-facto when the first consumer SSDs were launched, and the consequences are still with us today - 2012's best SSD, the Samsung 840 Pro, offers a transfer rate of 520 MByte/s. This means that it is only 20 MByte/s slower than the latest 850 Pro. If an 860 Pro were to be released, its transfer rates would be similar. This stalemate can only be broken by a new interface, and such an interface is scheduled to be unveiled this year. NVMe Express (NVMe) is designed for Flash memories, and it overrides the speed limitations.

Transfer rates in GB/s

NVMe controllers are already being used in server disks. Marvell's 88NV1140 controller, which was unveiled at the beginning of the year, is expected to finally lend wings to SSDs for private users. It is small, frugal and optimised for mobile devices. Another Marvell controller, namely, the 88SS1093, is targeting PC-related applications. It reads data from the SSD at the rate of 3 GB per second. However, because of NVMe, the Flash drive can no longer be connected via SATA. This makes it necessary to switch over to PCI Express. In the past, PCIe has primarily been used for graphics cards, but SSDs can also benefit from it. A PCIe connection comprises of several lanes, which can be connected directly to the CPU. Two line pairs run through each lane - the first one runs from the SSD to the CPU, and the second one runs in the opposite direction (refer to graphic on the left).

Unlike a SATA SSD, a PCIe SSD can simultaneously send and receive data. There are already a few items that are compatible with PCs, such as the RevoDrive 350. It is controlled through 8

lanes, and features 16 lines running in each direction.

However, the RevoDrive also uses AHCI to transfer the data. Because of this, it can only attain transfer rates of over 1.5 GB/s because it is organised as a RAID in which four SSD controllers are combined - not the best solution.

Optimised for multi-core systems

The execution of reading the writing procedures normally takes place in several individual steps - 4-KB blocks are often read out or re-specified. The input/output scheduler of the operating system installed on the CPU and the controller on the hard drive facilitate these transactions. If necessary, the AHCI provides a queue for the implementation of the I/O actions, which can list up to 32 commands. Such a workload normally keeps a CPU core busy. However, the AHCI finds it difficult to distribute the workload across multiple cores. Furthermore, an AHCI only provides the scheduler with a single interrupt for actuating or concluding a data transfer (refer to the table in the lower left).

A multi-core CPU, PCIe with multiple lanes and an SSD controller that simultaneously controls multiple memory chips - that's what a modern PC should look like. In order to ensure that this mixture works perfectly, NVMe increases the number of queues and the number of commands per queue to 65536. NVMe also establishes two different types of queues - submission queues list the commands that the SSD controller has to implement. The tasks that have been completed are tallied in the completion queues. A queue pair is allocated to every single core, which in turn ensures that multi-core CPUs are used to capacity. The system also allows multiple queue pairs to be allocated to each core. In such a case the queue pairs have different priorities. At the same time, the scheduler is allowed to send an interrupt signal to each core. These measures optimise the data transfer and reduce the latency period associated with the initiation of reading and writing procedures.

Board manufacturers such as ASUS are already installing NVMe drivers for UEFI in a selective manner. However, it would make more sense to wait for the mainboards for Intel's next-generation Skylake chips, which are scheduled to be launched in the autumn. Intel is enhancing the number of PCIe lanes, in order to ensure that there is enough bandwidth for both the SSD and the graphics card. Furthermore, the support for PCIe 3.0 doubles the speed of each lane to 1 GB/s. So far, Intel's CPUs have only been connected using the PCIe 2.0 system that facilitates a speed of 500 Mb/s for each lane. In the summer season, Intel is also scheduled to launch the new SSD-750 series with NVMe and PCIe 3.0 for notebooks and PCs. 

feature

streaming music



Music In The Clouds

Cloud-based music streaming music services are aplenty, but we cherry-pick the best of the lot, and see how they compare against one another

By Nazrin Zain

“The Cloud” truly began to take off as a consumer service platform when cloud-storage services like Dropbox, Google Drive and the like became the way for both consumers and businesses alike to store data off-site.

Ever since then, companies that specialise in streaming music online, such as Spotify and Rdio have come up the ranks to provide consumers with easy way to listen to their favourite music without having to download them illegally. This

provides users with an easy and fuss-free way to listen to songs that they love, anytime and anywhere they want.

There have since been several companies that popped up, offering similar services, yet each of them have their own selling points that make them unique from one another. In this article, we take a look at four of these services; Spotify, Rdio, Deezer and the latest to join the fray, Jay Z's Tidal, and see what makes them special.

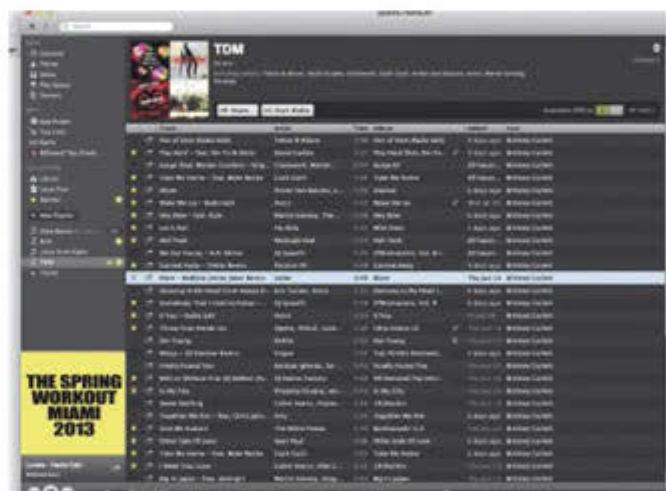
Spotify

Spotify is quite possibly the most notable name amongst all of the music streaming services we have on this list. Boasting over 60 million users around the world in 50 different languages, the Swedish company has grown from strength to strength over the years and features music content from big-name labels such as Sony, EMI, Warner Music and Universal, amongst others.

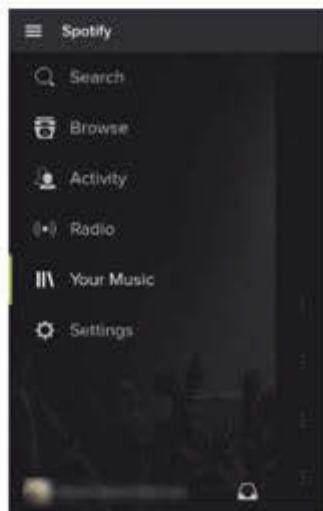
Spotify is available on both desktop and mobile devices, on platforms ranging from Windows, Mac OS, iOS, Android, Symbian and Windows Phone, to name a few, with the Sony PlayStation 4 gaming console a recent addition. The service operates on a freemium basis, allowing users to listen to the service's full catalogue of songs for free, but with ads thrown in between songs.

If you're too busy to build your own playlist, or just want the service to surprise you, Spotify already has a set a lot of playlists based on activities, moods and music genre that makes things easy for you. Simply pick and choose whichever playlist tickles your fancy, and Spotify will do the rest.

Audio quality is arguably the best of the lot, but this depends on the quality of your internet connection as well. The bitrate varies depending if you're on WiFi, 3G/LTE or Edge. To counter this, you can opt to pay a fee of about RM15 a month for Spotify Premium. On a premium account, you will no longer have to contend with ads, and you can also download songs of your choice to your offline playlist, if ever in case you end up in places with no internet and want to have some tunes to listen to.



Spotify's main window



Spotify's mobile interface

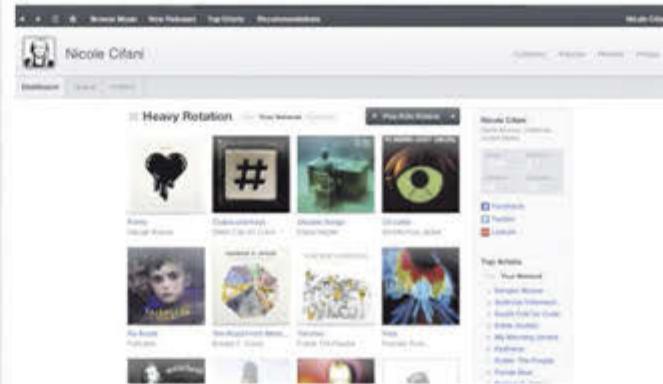


Rdio

Many may not know this, but Rdio was created by the founders of Skype, Niklas Zennstrom and Janus Friis in 2010. Much like Spotify, it boasts a big selection of music, mainly from the big four music labels: Warner Music, EMI, Sony Music and Universal Music. It also has curated content from Merlin Network, IODA, INGrooves, The Orchard, CD Baby and IRIS Distribution.

One of Rdio's biggest pool is that while it is a music streaming service, is that it is also a social platform of sorts where you can build your own playlists and share it amongst friends and strangers. This curated form of music is great if you're into listening to brand new genres that you otherwise wouldn't listen to.

It is available as a web app on desktop platforms including Mac and Windows, and there are also apps available on mobile platforms such as Android, iOS, BlackBerry and Windows Phone. You also have the option to go free or pay for the service, and in Rdio's case, you have a trial period of 30 days on mobile and 60 days on the desktop web app, after which you can opt to pay for the RM14.90 monthly fee if the service is up to your needs.



Rdio's main window



Rdio's mobile interface

Tidal

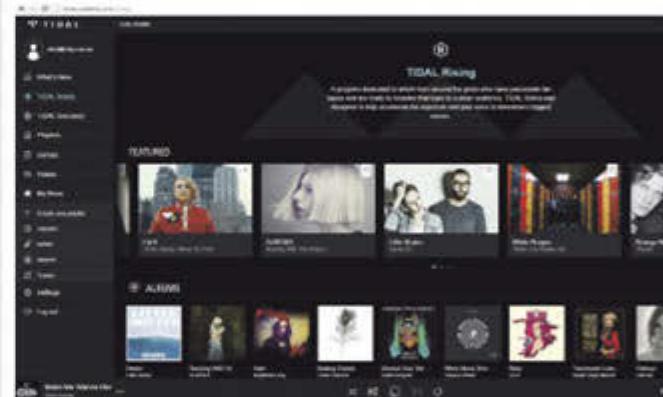
Tidal is the latest kid on the block, a brainchild of Jay-Z which aims to change the music streaming industry on its head. Calling Tidal just a "music streaming service" would be quite misleading because it has 75,000 music videos on top of its very impressive 25 million song catalogue, no doubt thanks to its owner's massive clout in the business.

Unlike the other music streaming services, Tidal is a fully paid service, with no freemium account option available at the moment. The reason behind this supposedly Tidal pays a bigger chunk of money to artists as opposed to other services out there, and they're providing features and exclusive content that other services don't seem to have as of yet, such as exclusive Tidal-partnered videos and such.

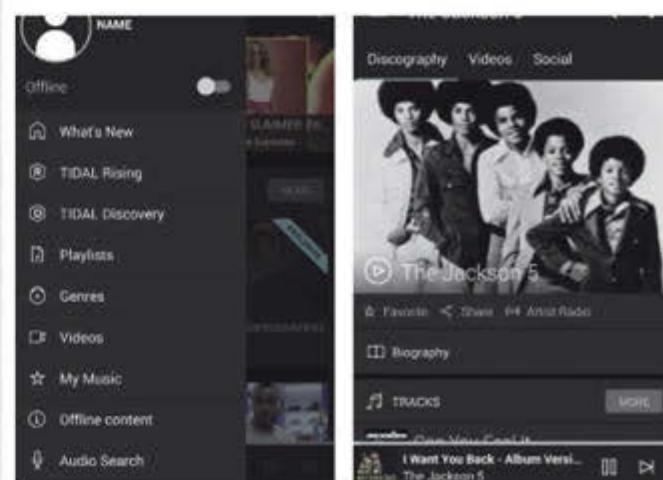
The other big thing that Tidal has going for it is that it is capable of streaming in lossless format, namely FLAC. There is of course an option for users to playback music in lower bitrates, namely 320kbit and 192kbit AAC, however this needs to be done manually via the settings menu as the service will not automatically downgrade the audio quality.

Not only that, Tidal is also the only one out of the lot that features support for a wide variety of networked music players, including Audeze, Denon, Dynaudio, Harman Omni, Sonos and others.

That being said, Tidal is also the only streaming service with two different tiers for pricing, as users are charged RM14.90 for standard usage, and RM29.80 for use of its HiFi (lossless) streaming services.



Tidal's main window



Tidal's mobile interface

Deezer

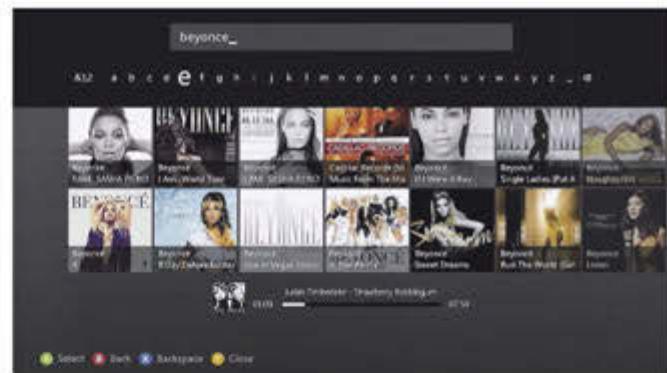
Deezer is most notably one of the more widely-known music streaming services in Malaysia thanks to its collaboration with DiGi, which provides the telco's customers free subscription to the music service by default. Considering Deezer's mammoth 16 million song database, this is nothing to scoff at as Deezer has one of the more unique selling points in its services compared to other music streaming services.

Subscribing to Deezer's monthly subscription fee, you get features such as better audio quality, including FLAC, which only one other service provides. With Premium, there are no ads, personalised recommendations, and most importantly, the ability to upload your own MP3s to your playlist on the service. This works in tandem with Deezer's offline playlist mode as well, allowing you to play music from both Deezer and your own collection all in one playlist.

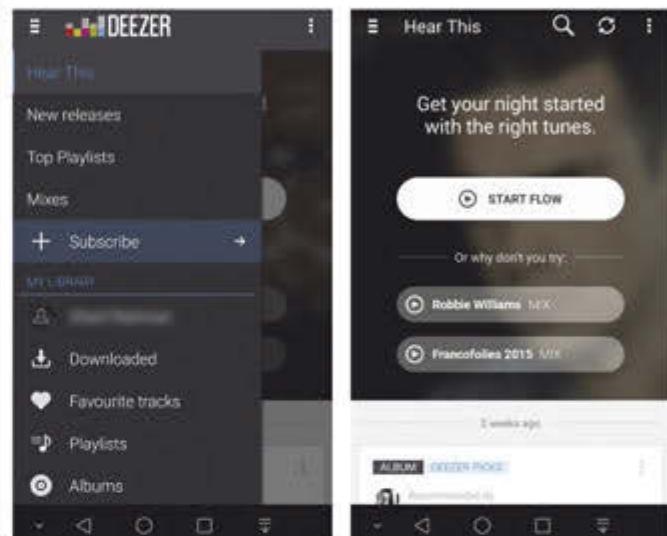
Verdict

All these music streaming services provide their own unique user experiences for a portion of the users' money, but as far as usability, features and convenience go, our best pick out of the four services has got to be Spotify.

This is due to the fact that Spotify users, regardless if they are free or Premium users get to use most of the features it has to offer right off the block. Arguably, it's also one of the easiest platforms to use to discover new music, and gain access to a wide variety of playlists right off the bat. Its recent partnership with Maxis to allow carrier billing also makes it easier for many users in Malaysia to hook up with the service. 



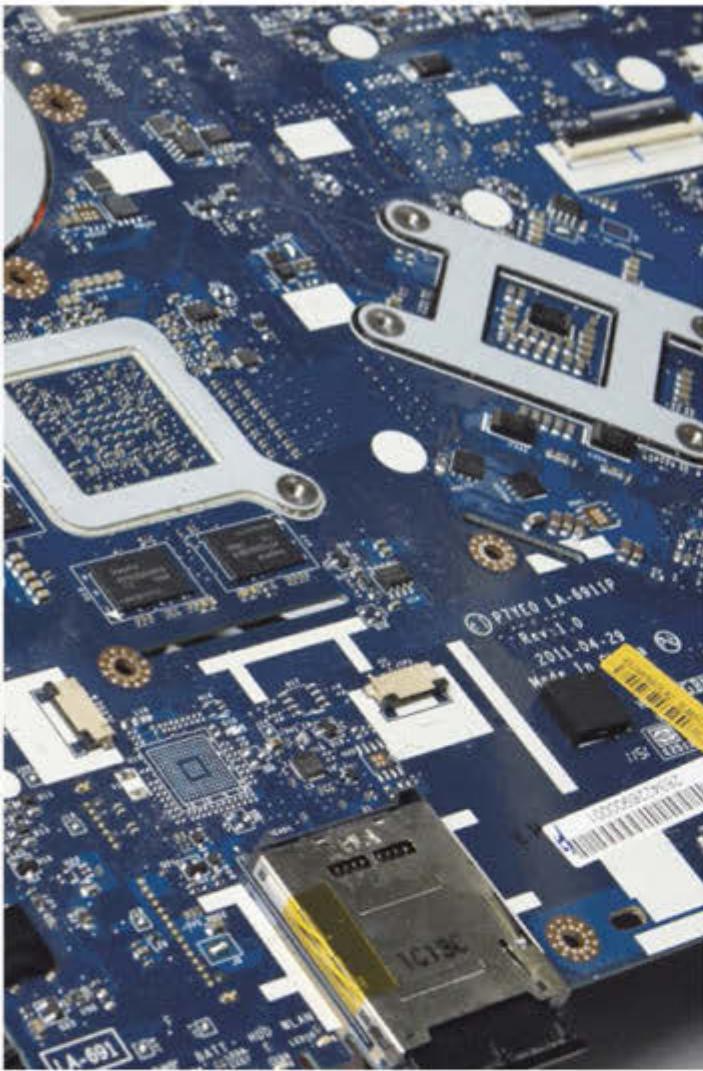
Deezer's main window



Deezer's mobile interface



SERVICE/ FEATURES	SPOTIFY	RDIO	DEEZER	TIDAL
Freemium	Yes	Yes	Yes	No
Fee	RM14.90	RM14.90	RM14.90	RM14.90 (Standard) RM29.80 (HiFi)
Carrier billing/ partnership	Yes (Maxis)	No	Yes (DiGi)	No
Offline Mode	Yes	Yes	Yes	Yes
Stream bitrate	320kbps/160kbps/96kbps	320kbps/192kbps/96kbps/64kbps	Lossless/320kbps	Lossless/320kbps/96kbps
Platform	Web, iOS, Android, BlackBerry, WP8, Symbian, PlayStation 3, PlayStation 4	Web, iOS, Android, BlackBerry, WP8	Web, iOS, Android, BlackBerry, WP8	Web, iOS, Android WP8, MeeGo
Music Catalogue	20 million songs	32 million songs	35 million songs	25 million songs, 75 thousand videos



Old computers are often a little sluggish, but expensive upgrades are not really worth doing too. We share tips on how to squeeze the best possible performance out of the system you own

By Christoph Schmidt

PC Tuning Made Easy

A computer can become slow when the software overwhelms the hardware. When it comes to notebooks, this is often the case at the time of delivery itself, since the manufacturers will cram it with unnecessary programmes and trial versions of software. This eventually slows down the boot-up process and occupies the meagre RAM during normal operations. Almost every piece of software that is installed later makes the situation even worse. Moreover, older hardware becomes very sluggish - a hard drive that has been filled up to

the brim responds a lot slower than one that is partially full. The dust that settles on the fans impairs the cooling capability, which in turn slows down the CPU. You can solve these problems at no extra cost by slimming down the software (page 51) and cleaning up your notebook (page 52) or PC (page 53). If none of this works, you can spend for extra RAM or a little SSD (page 54), which in turn provides the extra capacity that facilitates smooth operations.

SOFTWARE Clean Up

With the right tools, you can clear out unnecessary programmes, empty temporary folders and create more space on the system drive

1 Set up a restore point

Before you get started, you should set up a restore point for your system, in order to secure Windows settings and the system files. This should be done even if there is only a minor risk of a crash. Pull up the "Advanced system settings" under "Control panel | System and security". Click the "Create ..." button in the "Computer protection" tab, assign a name and click "Create".

2 Remove crapware & auto-starts

Download PC Decrapifier from the website and launch the programme with administrator rights. The tool will then identify the unnecessary software (which is often pre-installed on notebooks and PCs) that should be uninstalled in the "Recommended" tab. The "Questionable" and "Everything else" tabs (which are shown in the image) list all the installed programmes. You can then select the unnecessary ones that are to be uninstalled. The strength of the tool lies in its ability to uninstall all the selected programmes at one go.

3 Delete temporary files

Programmes and the Windows operating system store temporary files in various folders. When the system drive begins to reach its capacity limit, the speeds of magnetic disks and SSDs suffer to the same degree – primarily because the lack of space slows down write access operations. The CCleaner tool helps you free up memory space and clear out auto-starts. Install the tool, downloadable from our website. The functions are listed on the left side. The "Cleaner" option serves to clear up memory space, and the list of individual points is divided across the "Windows" and "Applications" tabs. Most of the default settings should be left activated, but when it comes to your standard browser, you should untick all the ticked options, since the space that has been cleared up is re-filled quickly during operation. Now, click "Analyse" and check whether all the listed points can be deleted, and then use the "Run Cleaner" option to start the cleaning run. Under "Tools | Startup", deactivate the unnecessary auto-starts that have nothing to do with the computer's hardware (ensure that the tools associated with the touchpad or the function keys remain active).

4 Find and remove space hogs

Large volumes of data accumulate quickly on the system drive. For example, this can happen if the browser's download folder or the local root folder associated with a cloud service such as Dropbox or Google is located on the system drive. Such space hogs can be identified with the help of the TreeSize Free tool that is on the magazine DVD. This tool provides you with an overview of all the folders and their sizes. You should then delete files or move them to other drives until at least 25 percent of the total capacity becomes available on your system drive.

1

System Protection

Create a restore point

Type a description to help you identify the restore point. The current time are added automatically.

System Emergency Restore 2013-04-13

2

The PC Decrapifier

Micro-star International Co., Ltd MS-AE6311

Recommended Questionable Everything Else

Careful! We may not have enough info and/or don't recommend removing these.

BurnRecovery

CyberLink PowerDVD 10

Microsoft Office

CPUID CPU-Z 1.71.1

Microsoft Visual C++ 2008 Redistributable - x64

HWINFO64 Version 4.42

3

CCleaner Free

Windows 8.1 64-bit

Analysis

Applications

Analysis Complete - {0.493 secs}

Details of files to be deleted (Note: No files have been deleted yet)

Internet Explorer - Temporary Internet Files

Internet Explorer - Cookies

Windows Explorer - Recent Documents

Windows Explorer - Thumbs.db

System - Empty Recycle Bin

System - Temporary Files

System - Windows Log Files

Advanced - Old Prefetch data

Windows - Windows Defender

Windows - MS Search

4

TreeSize Free - C:\

File Scan View Expand Options Help TreeSize Professional

Name	Größe	Belegt	Dateien	Verze.
68.870,8 MB C:\	68.762,1 MB	68.870,8 MB	229.860	45.694
31.065,1 MB Users	30.995,1 MB	31.065,1 MB	38.825	7.915
29.370,6 MB Christoph	29.336,6 MB	29.370,6 MB	24.527	3.584
18.173,7 MB VirtualBox VMs	18.173,6 MB	18.173,7 MB	17	6
5.392,4 MB android	5.392,2 MB	5.392,4 MB	59	10
5.126,0 MB AppData	5.089,1 MB	5.126,0 MB	24.196	3.371
329,2 MB cminstaller	329,1 MB	329,2 MB	36	7
271,7 MB Music	271,5 MB	271,7 MB	63	12
47,3 MB mediathek3	47,3 MB	47,3 MB	4	0
14,5 MB Pictures	14,4 MB	14,5 MB	32	54
8,2 MB My Things	8,2 MB	8,2 MB	19	4
5,2 MB [14 Dateien]	5,2 MB	5,2 MB	14	0
0,0 MB SkyDrive	0,0 MB	0,0 MB	3	5
1,5 MB Desktop	1,5 MB	1,5 MB	4	0

Cleaning a NOTEBOOK

The ventilation systems of many notebooks get clogged up during operation, which leads to downsampling and a lack of stability. This is how you can clean up the ventilation system

We are using a four-year old Acer Aspire 7750 to demonstrate how you can clean up the ventilator. The individual steps can also be performed on other notebooks. Detailed disassembly instructions can often be found on YouTube - run a search for the respective model name. In case of the Acer device, the fan blows out the cooling air that is sucked in from below through a narrow louvre grid that is located at the rear side. In the interior, the dust that accumulates in front of the grid impairs the cooling system - In case of our notebook, the cooling system was impaired to such a high degree that the CPU ended up being throttled when it was subjected to a load, and suffered a 30% drop in performance.

1 Prepare the notebook

Place the notebook with its bottom facing up. Remove the battery and the base plate that is fastened into place with three screws. Detach all the visible screws (in case of the Acer 7750, three of them are situated under the hard drive that is in front of the DVD drive) and undo all the plug connections between the two WLAN antennas and the plug-in card. Now, put the computer down in the correct position. The display must then be opened up, because in case of the Acer notebook, the keyboard needs to be removed. Ideally, you should lift it by jamming a card under the [Esc] key and the keys that are right next to it. Now, when it comes to the little lugs that hold the keyboard from above, the lug on the left should be pushed backwards. Reach under the keyboard's base plate and gradually push all the retaining collars aside. Disengage the keyboard's flat cable plug-in connection and lift it out.

2 Expose the mainboard

Clip on the casing's top cover (keyboard frame and wrist rest) at the upper left edge using a plastic lever or a card (2a). Guide it around the entire cover until you can lift it. You must also detach the touchpad's flat cable connector. Since the fan is situated at the bottom side of the mainboard, you have to remove it. Release all the screws and undo the plug-in connections of the mainboard that lead, for example, to USB ports, the display or buttons on the casing. Lift it out (2b) and place it upside down on the table, so that you will be able to reach the fan's screws.

3 Get rid of the dust

In case of the Acer Aspire 7750, the fan casing can be removed after two screws and the power plug between the mainboard and the heat pipe have been disengaged. Hold onto the fan wheel and vacuum it off, using either a small desk vacuum cleaner or a normal vacuum cleaner on low. In our case, the dust between the cooling fins had gotten stuck, so we used a compressed air can to blow it into the running vacuum cleaner from the outer side of the fins. You should also vacuum off the other internal parts of the notebook before you reassemble the device in the reverse order.

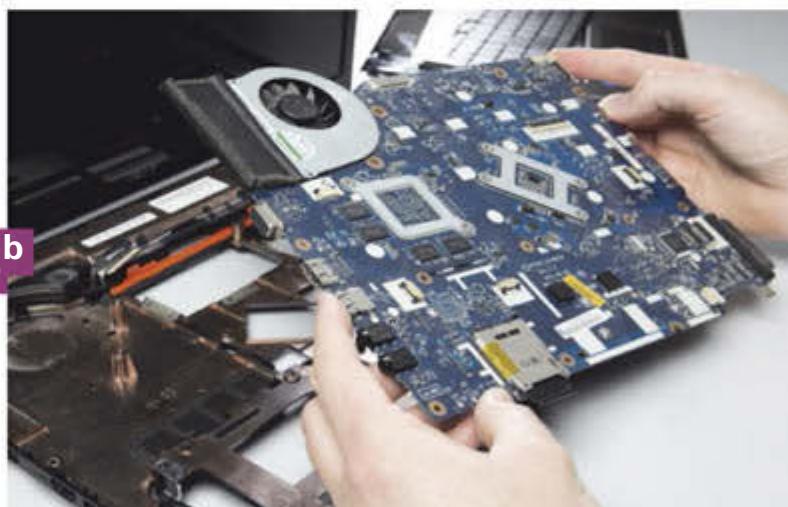
1



2a



2b



3



Dusting off a DESKTOP PC

Dust can easily spread out throughout a large desktop casing, but it can also be removed relatively easily

1 External and internal cleaning

Before you open up your desktop casing in order to clean it, you should first wipe it down from the outside with a microfibre cloth, and vacuum off the ventilation openings and the bottom side using an upright vacuum cleaner or a normal vacuum cleaner on low (1a). If the front side can be removed, unclip it and vacuum off the lower-side dust deposits. Then remove the left-side (when viewed from the front) casing cover. Collect all the visible dust. If casing fans (1b) have been installed, remove them for cleaning and vacuum off the rear-side grid.

2 Clean the cooling unit

Just like a notebook, a desktop CPU's cooling unit can also get clogged up, as dust accumulates between the fan and the cooling element. However, this dust is easy to remove. Hold on to the fan wheel with one finger (if it's hard to reach, insert a screwdriver) and vacuum off the fan. You may need to use a compressed air can on the fins, while you hold the vacuum cleaner in place. If your graphics card also has an active cooling unit, you should subject it to a similar procedure. In order to do this, you should, in an ideal scenario, remove the graphics card altogether.

3 Replace the thermal paste

If you have a tube of thermal paste (it is often delivered along with cooling units, but can also be purchased for a few ringgit) on hand, replace the one on your CPU with a fresh application. Release the locking device of the CPU's cooling unit and remove it. This must be done carefully, as the cooling unit clings to the processor if the paste is quite old. You can then check whether there is any dust anywhere else. Use a plastic object (a spatula or a card) to scrape off the old thermal paste from the cooling unit and the CPU. Use a soft tissue or a cotton bud that has been soaked in propyl alcohol (which can be obtained at a pharmacy) to get rid of the residues. Now, apply a pea-sized amount of new thermal paste on the CPU, put the fan in position and spread the paste out by turning or pushing it to and fro. Fix the cooling unit into position and plug in the fan's power plug.

4 Optimise the ventilation system

If the cables in the casing obstruct the flow of air from the lower front side to the upper rear side, you should bundle them up using a cable tie. If the PC does not have a casing fan (see image 1b), you should buy one for a few ringgit for better airflow. Furthermore, you should first measure the size of the ventilation grid at the rear side (usually 120 mm). Check whether the 'CHA_FAN' – or the similarly-named electrical connection on your motherboard – has three or four poles, and get a suitable model. Install it in the upper part of the rear section in a manner that ensures that it blows the air out of the casing. The arrow at the edge indicates the direction of the airflow.

1a



1b



2



3



4



Upgrade FRUGALLY

If the computer has a multi-core CPU instead of an ancient single-core, the RAM and the sluggish HDD are likely to be the bottlenecks

1a Analyse the RAM

By clearing out the software (page 51), you have ensured that no RAM capacity is being wasted. However, the device also needs to have a sufficient quantity of RAM to run smoothly. Each computer operating Windows 7 or above (64-bit) should have at least 4GB of RAM. However, an optimal solution would involve a RAM size of 8GB or more. To check your upgrading options, download and install CPU-Z, and open the "SPD" tab. The "Memory Slot Selection" drop-down list tells you how many slots (i.e. spaces for memory modules) your system has, and it also identifies the ones that are already occupied. For example, if one of two slots is occupied by a 2GB or 4GB stick, you would buy a module that has the same size for optimal performance – running an internet search for the 'part number' of the existing RAM can help. If both slots are occupied by modules that are too small, replace them with larger ones. At the end, an even number of modules that are of the same size and as similar to each other as possible should be in the memory slots.

1b Install RAM

In case of most notebooks, the RAM is situated underneath a bottom flap, which is much easier to reach than the cooling unit. To replace a module, push its two retaining collars aside. It will then tilt up, and you will be able to remove it. Position the new module at the slot in a manner that ensures that the notch is properly aligned, and press it down until it clicks. For desktop PCs, two brackets are laterally positioned on the module. The opening of the brackets pushes the module out of the slot. When it comes to the installation process, you have to fix the module into position and push it into the slot until the brackets snap into place.

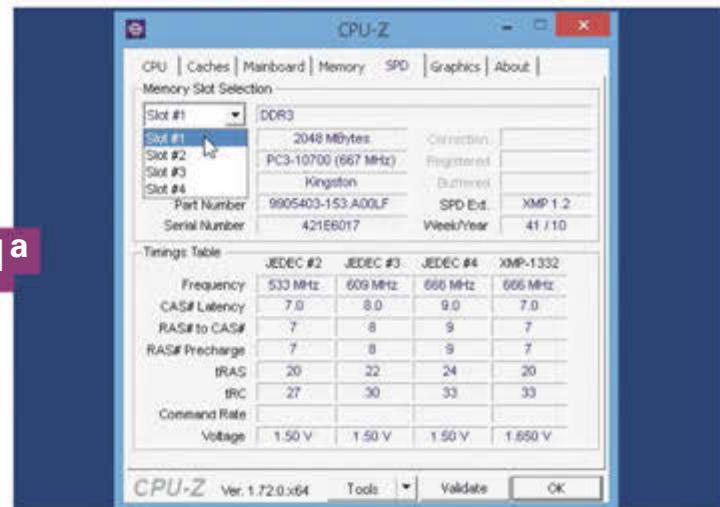
2a Select a convenient SSD & transfer the OS

The magnetic hard disk, especially for cheap or older notebooks, is the bottleneck that slows down the entire system. An SSD priced around RM300 (120GB model) represents the best way to enable faster speeds on older machines. A Samsung Laptop Kit will make it particularly easy for you to relocate your operating system and data. In addition to the SSD, it also contains a USB adapter and the Data Migration software, which can be used to load all the data on the new SSD before the conversion process is begun.

2b Install the SSD

In case of most notebooks, the hard disk is situated under an easy-to-open base plate. To remove it, release the mounting screws, move the HDD a few millimetres away from its plug connection and remove it. Detach the frame or the mounting rails from the hard disk, and attach it to the SSD. Now, install the SSD, push it onto the plug connection and re-tighten the mounting screws. 

1a



1b



2a



2b





Proper Encryption Required

According to Edward Snowden, only a powerful encryption system can protect our privacy, and only if it is implemented properly. We will show you how to secure your documents, photographs and web-based communications

By Markus Mandau

Ever since Edward Snowden made his revelations, we have known that the reliability of crypto-procedures is being put to the test. Intelligence agencies with massive resources keep subjecting the procedures to a permanent stress test, and this begs the question of which secure encryption methods can be trusted in the future. The core of this issue revolves around the commonly-used symmetric crypto-procedures (see right), since they are used offline for the purposes of data encryption, in addition to being used online to facilitate secure web-based communications (e.g. via HTTPS). The method of block encryption has become established. The stream encryption method meanwhile represents an alternative to this particular procedure. Instead of sub-dividing the data into blocks, the stream encryption procedure encrypts the data in one fell swoop. An XOR operation (see right) is used to mix the original bytes with the data stream generated by a pseudo random number generator. The RC4 stream encryption procedure is often used in conjunction with web connections, but it is considered to have been cracked by the NSA. In 2013, a research team proved that RC4 can be decrypted if enough data is recorded.

Block encryption is a harder nut to crack. The longer the key, the more bit combinations a brute force attack has to try out. The latest methods like AES or Twofish differ from each other in terms of their mathematics, and they offer a comparably high level of security as they use a minimum key size of 128 bits. They have superseded the DES standard, which uses a key size of 56 bits. When it comes to situations involving WLANs, PCs and HTTPS, AES has gained acceptance as the weapon of choice.

Key size and mode must be compatible

However, a poor password can make even AES vulnerable, since it serves as the basis of the key. The crypto-software uses a hash function to transform the password into an AES key. The mode in which AES is used can also be a weakness. An electronic code book (ECB) generates an output that 'looks' like the input. Experts criticise the fact that the crypto-library in Android has pre-adjusted the ECB. Researchers at Berkeley found out that 70 percent of developers use this particular mode while installing such a function. Many encryption programmes such as Microsoft's Bitlocker use cipher block chaining (CBC), a mode that modifies the key for each block. This results in the creation of pure 'data noise'. In theory, there are modes that are both better and more complex, but CBC is a good option for offline encryption. However, the situation is somewhat different when it comes to web communications (refer to the lower part of the next page).

When it comes to the web, a secure HTTPS connection is set up in two steps: the server associated with the browser uses an asymmetrical encryption procedure (see right) to establish an encrypted connection. This encrypted connection facilitates the exchange of keys for the subsequent web communication, which in turn is encrypted through the use of a symmetrical procedure such as AES. If contact is made using the established RSA asymmetrical procedure, the server generates two keys: the secret private key for decryption, and the public key for encrypting messages; it is handed over to every browser that makes contact with the server. Mathematically, the key pair is generated using prime numbers. The longer the key, the larger the prime numbers that an attacker would have to find. Alternatively, servers and browsers can also use the Diffie-Hellman (DH) method.

In this case - instead of exchanging keys, the server and the

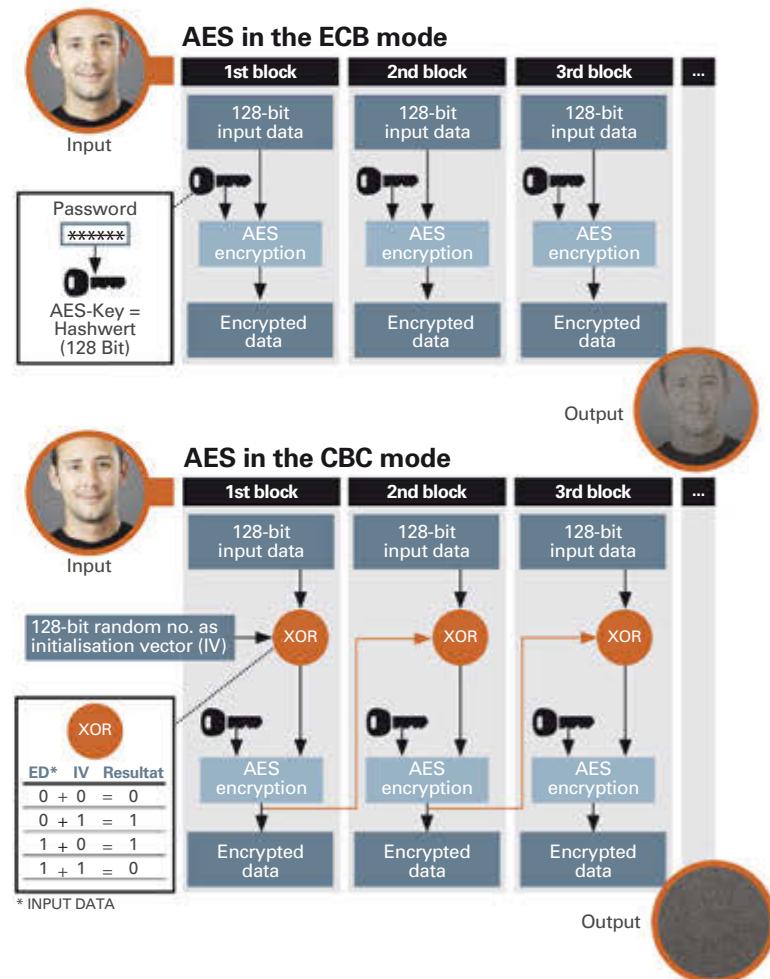
Symmetrical encryption methods

There are two different types: A stream encryption process like RC4 uses an XOR operation to combine the data bit by bit with a random value. A block encryption process is always employed on segments of the same size. Each section goes through several rounds of encryption.

Encryption	AES	Blowfish	Twofish	3DES	RC4
Typical application area	Files, web	Files	Files	Files, web	Files, web
Encryption type	Block	Block	Block	Block	Stream
Security	Strong	Strong	Strong	Moderate	Weak
Normal key size	128 Bit	128 Bit	128 Bit	112 Bit	2.048 Bit
Block size	128 Bit	64 Bit	128 Bit	64 Bit	-
Encryption rounds	10-14	18	16	16	1

AES: Selecting the right mode

AES offers various operating modes, which are associated with various levels of encryption quality. Electronic code book (ECB) isn't a good option, since the characteristics of the input are retained. Cipher block chaining (CBC) varies the key for each block, generating an output that appears to be random.



The right key sizes for the web

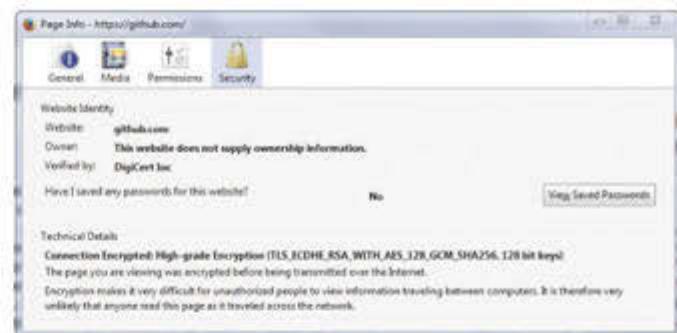
HTTPS uses asymmetrical procedures for key transfers and signatures. Key sizes of 512 bits can be cracked easily, and key sizes of 1024 bits are debatable. Key sizes of 2048 bits are currently secure. If the encryption makes use of elliptical curves (EC), shorter keys can suffice.

Encryption	RSA	DSA	ECDSA	DH*	ECDH*
Insecure key size up to	1.024 Bit	1.024 Bit	160 Bit	1.024 Bit	160 Bit
Secure key size from	2.048 Bit	2.048 Bit	192 Bit	2.048 Bit	192 Bit
Application area	Key exchange, signatures	Digital signatures	Digital signatures	Key exchange	Key exchange

* DIFFIE-HELLMAN KEY EXCHANGE

Identify the strength of the web encryption

When you click the key symbol in the address bar, Firefox displays detailed information about the cipher suite of the HTTPS connection. With a certain amount of prior knowledge, you can estimate how secure it is.



Crypto level		Evaluation
TLS	HTTPS version	The newer TLS should be preferred to the insecure SSL.
ECDHE	Key exchange	RSA and Diffie-Hellman (DH) are decent, but DHE and ECDHE (see text on the left) are better.
RSA	Authentication	When contact is made, it ensures that the server is legitimate. RSA is used frequently.
AES_128	Symmetrical encryption	128-bit AES represents a secure standard. RC4 is considered to have been cracked, and is prohibited in TLS (see table).
GCM	Mode	The CBC mode facilitates attack options. The GCM mode is, as a part of TLS 1.2, the better option.
SHA256	Hash function	Integrity protection for communication. SHA-1 can be cracked. The example relates to SHA-2, and specifies the key length. A length of 256 is okay.

Know the weaknesses of the HTTPS versions

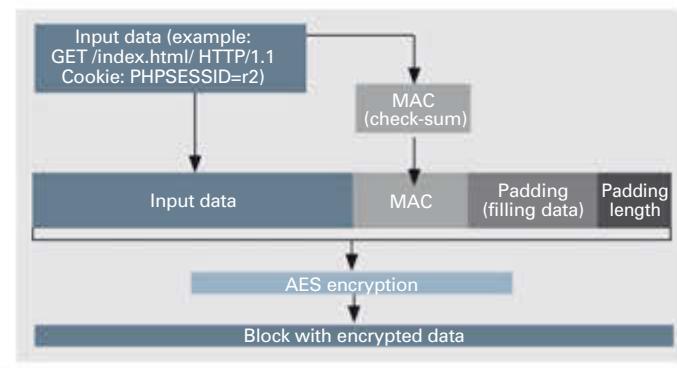
HTTPS is available in various versions – SSL 2.0 is considered to be insecure. The RC4 encryption has been cracked. Man-in-the-middle attacks exploit weaknesses in the CBC mode and the compression. TLS 1.2 is currently secure, if the server deactivates compression.

Weak points	HTTPS version			
	SSL 3.0	TLS 1.0	TLS 1.1	TLS 1.2
	Use of RC4	Q	Q	Q
	Version rollback to SSL 2.0	Q	Q	Q
	CBC mode	Q	Q	Q
	TLS compression	Q	Q	Q
	HTTP compression	Q	Q	Q

Q YES @ NO

First authenticate, then encrypt

In HTTPS, a message authentication code (MAC) is provided as an integrity protection facility. The block is then filled up through a padding operation and encrypted in the CBC mode. The last byte specifies the padding length. During the decryption process, this is used to identify the position of the MAC.



the Galois/Counter Mode (GCM). GCM installs integrity-lettering in each AES block. This integrity-lettering is combined with the input data through the use of an XOR operation. This renders Poodle ineffective.

browser only exchange specific values. They then use these values to separately and independently calculate the symmetrical key. This calculation is carried out with the help of a mathematical function. The same rule of thumb applies to this case as well: the larger the values, the more secure the procedure. The advantage of Diffie-Hellman implementations is the fact that a new key pair is generated and then discarded for each session. This procedure, which is known as 'ephemeral DH' (DHE) or 'perfect forward secrecy', avoids a shortcoming of RSA; if an attacker steals the server's private key, he can decrypt its entire web communication process. ECDHE – which is the newest variant of the DHE procedure – uses elliptical curves for its calculations, thereby reducing both the DHE length and the computing time. This makes the web encryption arrangement future-proof: A 384-bit ECDHE key is as secure as an 8192-bit RSA key!

Identify weak points in HTTPS

You can check the quality of the encrypted HTTPS connection with the server (see right). In Chrome or Firefox, clicking the key symbol in the address bar discloses the corresponding information. The browser identifies the encryption combination (cipher suite) that has been selected by the server. The framework conditions for the cipher suites (e.g. RC4 or AES for symmetrical encryption) target the various HTTPS levels from SSL 3.0 onwards, whereby the latest version (TLS 1.2) is considered to be the most secure one. Servers should avoid the outdated SSL 2.0 altogether.

Unfortunately, SSL 3.0 allows a mode in which the system falls back on 2.0, and this mode can be activated through a man-in-the-middle (MITM) attack. In an MITM attack, the attacker intercepts the encrypted communication between the browser and the server, manipulates it and analyses the result, to exploit weaknesses.

The latest HTTPS attacks like Poodle rely on a weakness in the CBC mode under SSL 3.0. The problem lies in the padding, which, in case of SSL 3.0, can be filled with random bytes – Beginning with TLS 1.0, this will no longer be possible. The term 'padding' refers to the filling up of the final block. This is always necessary, because in a block encryption scheme like AES, all the blocks have to be of the same size. The padding area with the filling data is encrypted, but the message authentication code (MAC) does not protect its integrity (see right). The last byte always contains the length specification of the padding area, which can assume 256 different values. Due to the lack of an integrity test, the MITM attacker can manipulate the length specification and decrypt it after running a maximum of 256 requests.

The attacker now knows the position of the MAC, and he also knows that his actual objective – the session cookie – is directly in front of it. His goal is to get his hands on this cookie, so that he will eventually be able to authenticate himself under a false name vis-à-vis the server. To decrypt the cookie, he once again makes use of the aforementioned method. He copies the encrypted final byte of the session cookie into the area containing the padding length. Now, he once again starts issuing requests, and changes the number of padding bytes for each request. When the number of bytes matches the alleged padding length (i.e. the cookie byte), he is considered to have completed his decryption operation. He then repeats this procedure for the second-last byte of the cookie, and keeps going through this cycle until the cookie has been decrypted. All modern browsers have deactivated SSL 3.0 as an emergency measure. Technically, TLS 1.2 has a solution at the ready, namely,

Encrypting Files

When it comes to situations involving the cloud, hard drives or files, you should use crypto-tools that specialise in the respective application

Personal and important pieces of information, documents and media files are often stored on our storage media in digital form, and they deserve to be protected. Crypto-methods such as AES and Twofish –which are usually offered within the framework of encryption tools – belong to the same generation and guarantee a relatively high level of security. As a user, you can't really go wrong with such procedures. Nevertheless, it can be worthwhile to use a special programme, depending on the project at hand: A hard drive encryption procedure often uses an operating mode that is different from the one used by a file encryption procedure.

For a long time, TrueCrypt was the weapon of choice when it came to encrypting an entire drive or backing up data in an encrypted container. The tool has now been discontinued, but the VeraCrypt open-source project is a worthy successor. The TrueCrypt code served as the basis for the new tool. It was also developed further, which in turn enhanced the quality of the encryption system. For example, VeraCrypt has improved the process by which the key is generated from the password. An expanded mode like CBC is not used to encrypt the hard drive. Instead, one uses the XTS mode. In principle, XTS encrypts the blocks like the ECB system, but it also integrates the sector number and the hard drive offset into the encryption scheme. Experts have not been able to come to an agreement regarding the level of security offered by XTS. Therefore, VeraCrypt offers the option of encrypting the data in several cycles (e.g. with AES first, and then with Twofish).

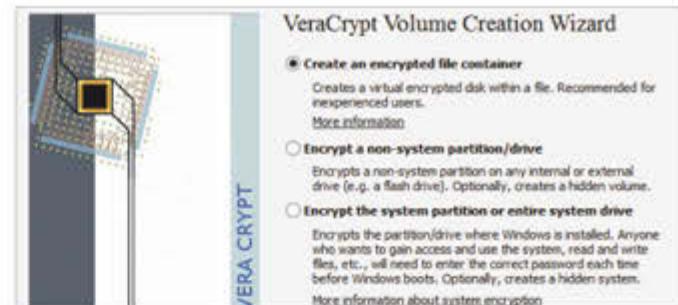
Random numbers and strong passwords

A freeware programme with a simple user interface (such as MAXA Crypt Portable or AxCrypt) is sufficient for the task of encrypting individual files. As an open-source programme, AxCrypt deserves to be recommended, but special care has to be taken during the installation process: the set-up file tries to install various additional tools, all of which should be unselected. Once a password has been entered (or a key file has been opened), AxCrypt starts going about its business when the user right-clicks a file or a directory. The tool uses a 128-bit AES system in the CBC mode. In order to generate a secure initialisation vector (IV), AxCrypt has installed a pseudo random number generator. If the IV is not a real random number, it weakens the CBC mode. MAXA Crypt Portable uses a similar procedure, but its encryption scheme has a key size of 256 bits. This is extremely secure, but it also takes a long time.

Those who upload personal information to the cloud must assume that cloud service providers such as Google or Dropbox scan the contents. Boxcryptor interposes itself into the workflow in the form of a virtual drive. A simple right-click ensures that the tool encrypts all the files stored therein before they are uploaded. What's also important is a password management tool such as Password Depot. It creates complicated passwords that no human being can memorise. However, the user must ensure that he does not lose the master password for the Password Depot.

Mounting and using crypto-drives

Like TrueCrypt, VeraCrypt also uses assistants to guide the user through the process of creating an encrypted drive. Alternatively, one can also protect an existing partition.



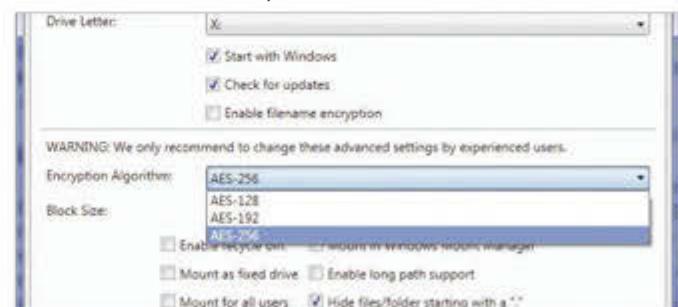
Encryption at the push of a button

A freeware programme such as Maxa Crypt Portable offers all the features that are required to speedily encrypt individual files with AES. Furthermore, the tool also generates a secure password at the touch of a button.



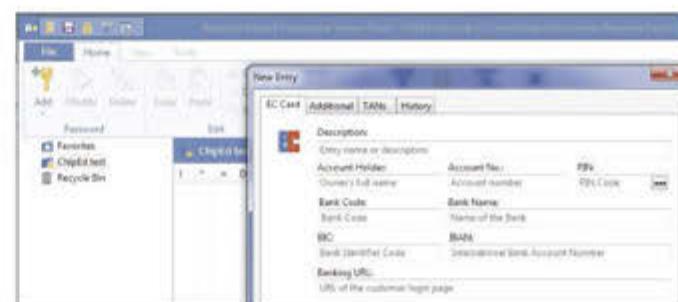
Cloud connection with a private sphere

Boxcryptor encrypts important files before they are uploaded to Dropbox or Google. An AES encryption system with a key size of 256 bits is activated by default.



Password manager as the central component

Long passwords are more secure. Password Depot generates and manages them, for situations involving the encryption of files as well as those involving web services associated with the transfer of the user's account data.



Encrypting Web Traffic

Even the very best web encryption is of no use if the certification has been cracked

A secure crypto-method for web encryption is important, but it's only part of the battle. Certificates play a central role, since the server uses the certificate to authenticate itself via the browser. The certificate ensures that the surfer is indeed using the website of his online bank, and not a duplicate site that looks like the real thing, but which really wants to tap off the access data. The browser can check certificates online with the help of a list of certificate authorities (CA) that has been stored in the system. Unfortunately, some CAs such as Comodo (which is one of the largest certification authorities) have proven to be untrustworthy in the past, and have issued fraudulent certificates. This is the idea for a man-in-the-middle attack. The most recent outrage involved the malicious Superfish adware programme that was pre-installed in Lenovo notebooks. This programme installed an RSA-encrypted root certificate for itself in Windows. Its private key was only protected by an easy-to-guess password, and could be extracted quite easily – This made it easy for attackers to intercept and manipulate the web communications. Those affected by this problem must now run an online check (see right).

Protective measures in the browser

Some browser manufacturers like Mozilla and Google are beginning to repair the certificate system. Their browsers keep their own lists, and have implemented additional protective mechanisms: HTTP Strict Transport Security (HSTS) prevents SSL stripping, which is an MITM attack that switches the HTTPS connection over to an unencrypted HTTP connection. HTTP Public Key Pinning (HPKP) directly counteracts fraudulent certificates: In this case, the server sends an encrypted pin to the browser when contact is made for the first time. If the browser visits the website again at a later stage, the website's server must identify itself using both the certificate and the pin.

The other important component is the key size of asymmetrical procedures such as RSA. 1024-bit keys were considered to be secure for a long time, but that has now changed. Dominique Peterson, project leader for internet early warning systems at the Institute for Internet Security (University of Westphalia), recommends that people use 2048-bit systems to defend themselves from attackers who have a massive amount of computing capacity at their disposal. He is calling for a key size of 4096 bits, but such a key size has not yet been implemented in crypto-programmes. In addition to surfing, this advice also applies to situations involving the use of PGP-based end-to-end encryption systems for e-mails. Many users use a GUI such as Gpg4win for the frequently-used GnuPG crypto-tool. GnuPG enables the user to generate independent RSA-encrypted private keys, and it also allows him to release public keys to his mail partner. When you create the private key, you should ensure that it has a secure key size of at least 2048 bits – Key sizes of 3072 bits (see right) are also possible. When it comes to encryption, using the right method is just half the battle: You also have to use it prudently. 

Weak point – Certificate management

Fake or cracked certificates – such as a certificate issued by Comodo – can circumvent the web encryption. Those affected by this problem can run an online check (filippo.io/Badfish) to find out whether their systems are clean.

Superfish, Komodia, PrivDog vulnerability test (updated again!)

Check the box below, if you see a "YES", you have a problem.

Do the test with all browsers installed.

Good. Superfish is probably not intercepting your connections.

Also no other SSL-disabling product was detected on your systems.

The best browsers for HTTPS

Many modern browsers use their extra features to enhance the integrity of a web connection. HPKP double-checks certificates, and HSTS compels the use of HTTPS. The 'No User Recourse' HSTS add-on enhances the level of protection even further (refer to the following image).

Browser	ab Version	HPKP	HSTS	HSTS No User Recourse
Chrome*	35	Q	Q	Q
Firefox*	35	Q	Q	Q
Internet Explorer	11	Q	Q	Q
Safari*	7	Q	Q	Q
Opera	23	Q	Q	Q

* ALSO MOBILE VERSIONS

Q YES @ NO

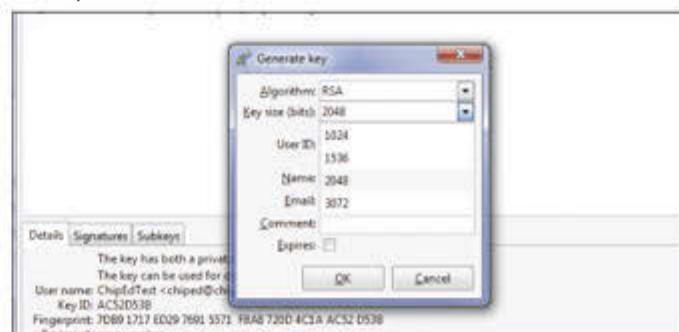
HSTS blocks insecure connections

Firefox, Chrome and Safari have implemented HSTS with 'No User Recourse'. If the user tries to visit a website with an insecure certificate, the browser denies access.



Activate powerful mail encryption

The GNU Privacy Assistant of the Gpg4win tool allows the user to generate keys for secure mail communication. You should set the key size to 2048 or 3072 bits.





Convenient Chatting Without Eavesdroppers

Today, smartphone users mainly communicate via messengers. Is WhatsApp the yardstick to follow? We checked the apps for both security and ease of use

By Fabian von Keudell

The year 2009 was the start of the end for SMS. It was in this year that Jan Koum and Brian Acton launched WhatsApp in the market – today it is the most widely used messenger on smartphones. The telcos didn't notice anything in the beginning – for them, the SMSs over the last 25 years was the goldmine. The companies effectively paid nothing for the transmission because the data volumes for the 160-character long messages are negligible when compared to voice data. This is why the transmission was totally free in the beginning. According to the British market research company Informa, more messages than the usual SMS were sent via the IP-based messenger in 2012. As the top dog, WhatsApp counted 700 million users worldwide in January 2015 – more than any other messenger. But the SMS will not disappear completely despite the triumphant advance of the messenger. There is one main reason for this: security. When sending an SMS, users can safely assume that the messages can

be read only by the intended recipient and not by a third party. However, this is not true in case of messengers.

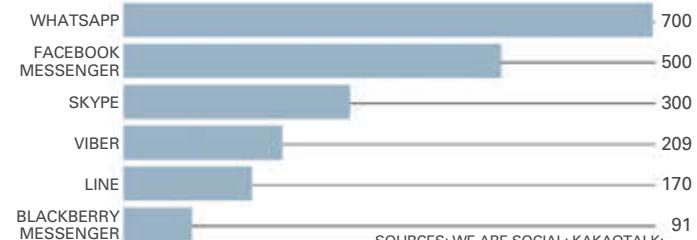
In the initial years of WhatsApp, new security loopholes were discovered almost every month. Communication was entirely unencrypted in the beginning and was transferred in clear text. A little later, it was found that it is very easy to change the user status of unknown accounts via a publicly accessible site. The encryption too posed some problems. Sometimes, mobile phone numbers were not transferred in an encrypted manner. At other times, the encryption key was very easy to read. As a result, hackers could not only tap the entire communication but also send messages to other users in the name of the victim.

WhatsApp and the other messengers today have definitely improved – but only a few uses secure encryption. Yet, the messenger apps are so easy to use and is something that most users don't want to miss in day to day communication. There is no

Dominance in the global messenger market

The two biggest messenger services belong to the Facebook group. Most smartphone users worldwide use WhatsApp. The Facebook messenger comes a close second. The reason is that Facebook messages can be sent via FB messenger.

ACTIVE USERS IN DECEMBER 2014 (FIGURES IN MILLION)



SOURCES: WE ARE SOCIAL; KAKAO TALK; TECHCRUNCH; TECH IN ASIA

character limit; photos and videos can be easily sent in a few steps; a chronological message history shows the messages exchanged so far and much more.

It is quite clear that a messenger offers many more advantages than SMS, but the crucial question is - which messenger should you use? There are many IP messenger solutions. So, when selecting messengers for our comparison test, we decided to include only popular names, which have been used widely in Germany. After all, of what use is a secure and comfortable messenger if one doesn't have any friends that use it?

Encryption is the key

The revelations of Edward Snowden shows that the secret services adopt a so-called full-take approach towards messaging apps - they read everything they can lay hands on. The security of this communication tool is thus very important. In the test, we placed special importance to strong encryption. This not only means encryption from client to server but also end-to-end encryption.

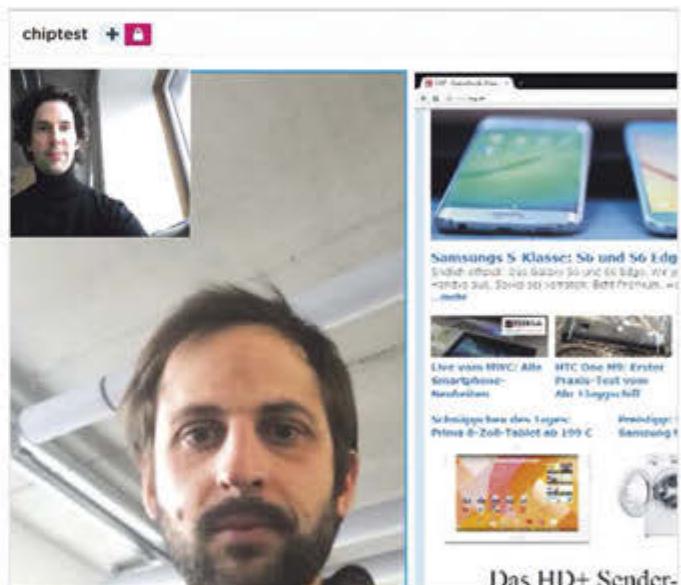
Such encryption prevents the messaging provider from reading or storing the data and – depending on the server location – transmitting it to authorities in case of doubt. Threema sets a good example here and uses secure encryption and stores data on servers in Switzerland, from where American services cannot access it directly. Other messengers, for example WhatsApp, Telegram and Viber, use such a protected connection too. However, the exact location of the servers is not known in case of the latter. In case of Telegram, end-to-end encryption is used only if it is explicitly activated and if the recipient has opened the app at the same time – thus it is not possible to send messages spontaneously. Most messengers use servers in USA and this can definitely lead to data protection problems because the secret services can force the provider to share the data – it doesn't matter if it is encrypted or not. In Europe it is more difficult to force access to data in this way.

WhatsApp has always had to struggle with data protection problems but it has been working in cooperation with the security company Whisper Systems ever since it has been taken over by Facebook. The result is end-to-end encryption of WhatsApp data for every asynchronous transfer. This ensures secure transmission even if one of the participants is not online and the data is temporarily stored on servers. The catch is that only the Android version offers very good encryption currently. iOS users continue to use an outdated, unencrypted variant of the transmission protocol. As of now, it is not known when Apple customers will be able to use a secure WhatsApp client. This cost the tool valuable points in our test. Points were also deducted for the encryption of media; WhatsApp encrypts messages before sending them but doesn't do the same for media files such as photos and videos.

In addition to protected messages, it was also important for us to test, what information the messengers require when someone wants to create an account. Most of them ask for the mobile phone number or an account with a web service as well as personal data. Threema is the only one that doesn't do all this; it randomly assigns a personalised code. The app can be used without any restrictions with this code. This earns many plus points. The current messengers must also offer the option of blocking annoying users – only because more and more spammers misuse IP messengers as an advertising medium for bulk mail.

WebRTC: chatting without an app

The open standard WebRTC makes it possible for users to start a video chat in the browser window without any additional software. You just need a link to enter the chat. Currently, such a chat URL is provided by the services listed below. Read more about WebRTC and the technology behind it in the Technology Lexicon "WebRTC" (published in our April issue).



You can also stream your own screen contents to your conversation partner via video chat



Firefox Hello has developed its own WebRTC service that can be started with the click of a mouse. Users of other browsers can then enter the open chat via a link.



vLine (vline.com) works with all WebRTC-compatible browsers. vLine sends a desktop notification to the conference creator as soon as a participant enters the chat.



Talky (talky.io) is the only service to offer an app for iPhone users. Using this app, one can then enter chat rooms via smartphones as well. The iOS Safari browser doesn't support WebRTC yet.



Videolink2.me (videolink2.me) reads its own contacts from the social networks Google+ and Facebook. This way, chat sessions with known people can be created faster.

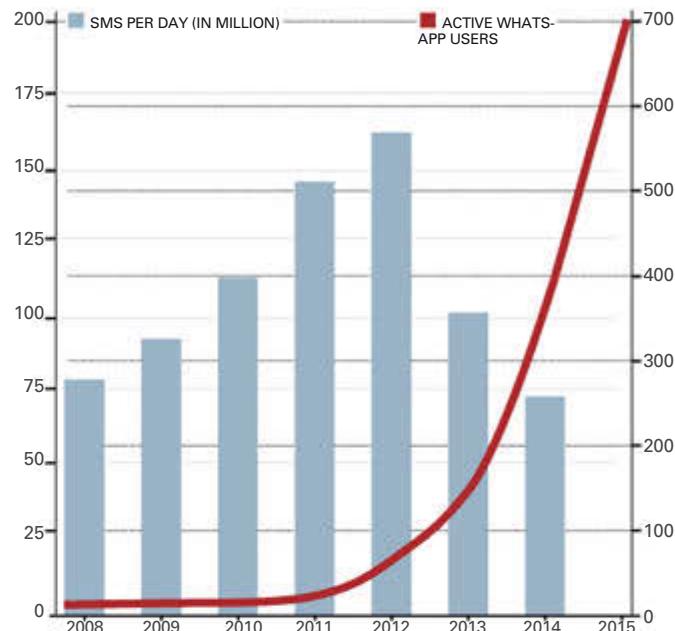
Easy to operate all-rounder

In trying to ensure the best security, a messenger must not neglect the comfort factor. Most messengers now offer a group-chat function or the option of sending audio and video files. A messenger should also give a transmission and delivery report. And if one changes or loses one's telephone, an integrated back-up function must ensure that the data doesn't get lost. Our test shows that this is not the case in all the messengers.

Many messengers add an extra useful feature or two to make their program more convenient. For example Threema, offers a sophisticated survey function. There is primarily one reason as to why the test winner Threema has not yet established itself as the standard messenger on iOS and Android devices despite its qualities: its ease of use. So long as Facebook doesn't make a data protection, usability or security related blunder in WhatsApp, it will continue to be the most used messenger in the world – even if competitors come up with not just secure but more convenient messenger apps in the future. 

WhatsApp cannibalised short messages

The messenger that was bought by Facebook last year is breaking new user records almost every month – and there seems to be no end to this. Since 2013, fewer and fewer users sending SMS. The widespread use of smartphones and messengers is the main cause for this.



SOURCES: VATM, DIALOG CONSULT, DIGITAL QUARTERLY, WHATSAPP

IP Messengers

	THREEMA	WHATSAPP	IMESSAGE	TELEGRAM	VIBER
Rank	1	2	3	4	5
Price	RM7.96	RM3.56	Free	Free	Free
Overall score	90	77	70	64	63
Security (40 %)	100	70	79	59	46
Comfort (30 %)	66	79	68	70	90
Availability (30 %)	86	97	43	72	86
SECURITY					
Encryption	End-to-end	End-to-end (only Android)	End-to-end (only iOS)	End-to-end (only in case of "secret chat")	Only Client-Server Not end-to-end
Login data	Not required	Mobile phone number	iCloud account	Mobile phone number	Mobile phone number
Server location	Switzerland	USA	USA	Great Britain	Cyprus (not confirmed)
Blocking of users	■	■	■	■	■
Turning off of read confirmation	■	■ (only Android)	■	□	■
COMFORT					
Backup possible	■	■	■	■	■
Group chat	■	■	■	■	■
Survey function	■	□	□	□	□
Audio chat in real time	□	□	□	□	■
Video chat in real time	□	□	□	□	■
Recording of audio message in the app	■	■	■	■	■
Recording of video message in the app	■	■	■	□	■
Sending photos/videos	■/■	■/■	■/■	■/■	■/■
Sending of location	■	■	■	■	■
PC software available	□	■	■ (nur Mac OS)	■	■
Ads included	□	□	□	□	□
AVAILABILITY					
Users worldwide (in million)	3.2	700	395	50	209
Operating systems	iOS, Android, Windows Phone	iOS, Android, Symbian, Windows Phone, BlackBerry	iOS	iOS, Android, Windows Phone	iOS, Android, Symbian, Windows Phone, BlackBerry
Rank in the German app store	1 (Category "purchased")	1 (Category "free")	No information	11 (Category "free")	5 (Category "free")

*NO. OF MAXIMUM ACCESSIBLE USERS

■ TOP CLASS (100 – 90.0) ■ UPPER CLASS (89.9 – 75.0) ■ MEDIUM CLASS (74.9 – 45.0) ■ NOT RECOMMENDED (44.9 – 0);
ALL RATINGS IN POINTS (MAX. 100); ■ YES ■ NO

Good functions but few users

Sometimes less known messengers provide very useful features that are not offered by the messengers of big providers. The catch is that the number of members of these messengers is often very less in this country.



Line Most Line users come from Asia. The distinguishing feature of this app is that the user doesn't have to enter his mobile phone number when logging in.



Kik Developed by the students of the University of Waterloo in Canada. The messenger need not be installed on a smartphone because a tablet version is available.



BlackBerry Messenger Originally, the service was conceived for communication among BlackBerry devices only. The company now provides the app for iOS & co. as well – but with limited success.



TextSecure The encryption of this Android program comes from Open Whisper Systems, which is also responsible for encryption in WhatsApp. Message transmission is therefore very secure.



myChat Like Skype, the app myChat enables the user to use video telephony with his partner in real time. The provider doesn't charge this service as yet.



WeChat In addition to the usual communication features, the chat program from China offers a message stream, which is similar to the timeline function of Facebook.



KakaoTalk Like Skype, the Korean messenger app provides a video telephony feature. It also has the "Plus Friend" function which provides the user with the latest information about a selected celebrity.



Tencent QQ This messenger which is popular in Asia gives its customers the option to register their own domain with the ending ".cn". Users can then be found more easily via this domain.

CHIP Verdict

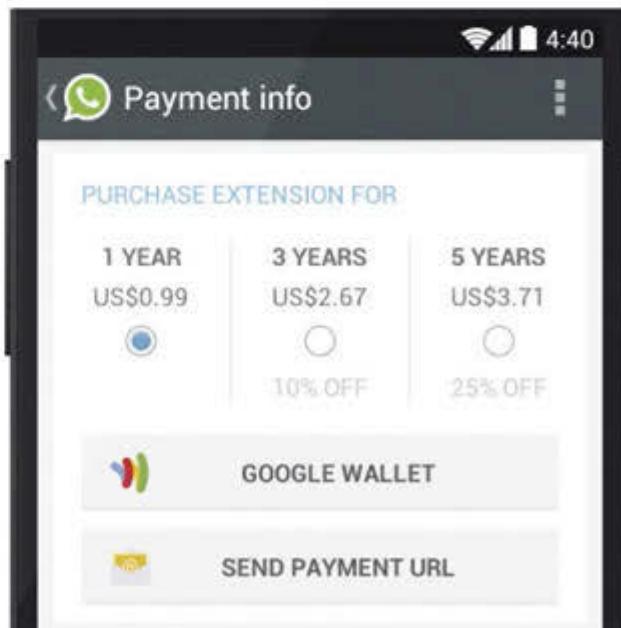
The basic principle of almost all messengers is the same: they all obviously have a chat function, notification function for incoming messages and most messengers also have a share function for photos and videos. The differences lie in the useful extra features. However, most messengers use outdated technology when it comes to security.

Best security Actual end-to-end encryption is a must in times of so many bugging scandals. Test winner Threema offers this for all available systems and also has a voting function on board, which can be used to quickly and easily gather opinions – like in the network service Doodle.

Best comfort Viber, the winner in the comfort category, offers everything that is important for a user today. A desktop app is available as well. A big disadvantage of Viber is the use of easy to tap Client-Server encryption.

Best availability Even if a messenger is secure and comfortable, this doesn't help if its fan community is too small. In this respect, WhatsApp offers by far the best numbers and easily wins in this category.

FACEBOOK MESSENGER	MICROSOFT SKYPE	GOOGLE HANGOUT
6	7	8
Free	Free	Free
59	54	51
44	40	44
71	64	67
90	85	56
Only Client-Server Not end-to-end	Only Client-Server Not end-to-end	Only Client-Server Not end-to-end
Facebook-Account	Skype account	Google Plus account
USA	USA	USA
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
500	300	540 *
iOS, Android, Windows Phone Google Plus account	iOS, Android, Symbian, Windows Phone, BlackBerry 4 (Category "free")	iOS, Android 31 (Category "free")



WhatsApp is officially demanding money for its service. However in many cases, it has extended the license free of cost



Welcome to the Holodeck

Until now, journey into space was restricted to a selected few. With the right instrument, anyone can now fly to the stars today – and do much more

By Benjamin Hartlmaier

By day, Mars is basically nothing but an inhospitable desert. The actual beauty of the red planet shows itself only at night: the night sky is so impressive that it is almost impossible to describe it in words. How do we know all this? Well, we have seen it – although only virtually, but so true to life as if we were actually standing on the Mars rover Curiosity.

A new generation of Virtual Reality (VR) goggles, which are being launched in the market by manufacturers like Oculus, Samsung and HTC, make it possible to go on such journeys to otherwise inaccessible places. Attempts to create such goggles were also made way back in the 90s. But since the presentations of those devices were virtual and hardly real, the excitement about Virtual Reality did not build up. The situation is different today – the sensor, display and processor technology has made such

progress in the meantime that the dream of a holodeck has now become achievable and, above all, affordable. Yes, there are still some problems in the technology – for example, concerning the freedom of movement in the real environment – but researchers are already working towards finding solutions.

Augmented perception of the world

In addition to virtual reality, another related technology, which has the potential to permanently change how we use computers today, is in the starting blocks. It is called Augmented Reality – the augmentation of perception with the help of digital data. We have taken a look at both concepts and will tell you about their strengths and weaknesses, where they are used and how even you can take a peek into the holodeck.

Artificial Worlds

A device that came out from the blue, this goggle made the IT scene awe with its capability and power. We are talking about the virtual reality goggle Samsung Gear VR. It can take the user to Mars for instance, to exotic beaches, to virtual art galleries or to the centre of the stage at a Paul McCartney concert, or even to a performance by Cirque du Soleil. If you put on a VR headset such as Gear VR, you will be surrounded by a three dimensional world, which you can see as you do from your diving goggles. The dynamic adjustment of the image section according to the respective viewing direction gives rise to complete immersion – the feeling of actually getting immersed into these worlds. This is why nobody felt like taking them off – except those who got scared of the height when they circled above Manhattan hanging on a helicopter.

Apart from Samsung, other big manufacturers like HTC and Sony are also working on VR goggles. However, the development was kicked off by a start-up called Oculus VR, which caused a hoopla with a crowd-funding campaign for its VR goggles in 2012. Oculus has now been taken over by Facebook. The social network site has recognised the potential of virtual reality and obviously expects that as time passes, more and more people would, very naturally, spend time in VR worlds – like they do in social networks today. Our first impressions tell us that this vision is reachable.

Virtual worlds from the smartphone

Technically, there are currently two types of VR goggles. One is what is known as stationary headsets, like the Oculus Rift or HTC Vive - which have displays as well as sensors for head movements. They are connected like a screen to a powerful PC via HDMI. The computer computes the relevant images using the Oculus driver. Sony too makes use of this type - VR goggle Morpheus for PlayStation 4 is supposed to hit the market in 2016.

The other type is mobile VR goggles like Samsung Gear VR, where a smartphone functions as the display, computer and sensor. Gear VR, which Samsung has developed in collaboration with Oculus, only works with Galaxy Note 4. But Samsung has already announced a version of Gear VR for the new Galaxy S6. However, the content offered is still quite limited; it primarily makes up of demos – content is still building in the store.

Google's approach to mobile VR is more open. The search engine has uploaded instructions on the Internet, using which one can make a smartphone VR holder made of cardboard and special lenses for about RM100. The Cardboard app with the corresponding applications runs from Android 4.2. If you don't want to experiment, you can order a ready-made Goggle from Pearl.

The cardboard goggles are at best a trial course of VR however. High-quality goggles like Samsung Gear VR will offer a much better immersion experience. The main reason is because the field of vision is hermetically cut off from the outer world, making it a truly immersive experience.

On the other hand, the applications are perfectly tailored for the



OCULUS RIFT

ADDITIONALLY USED HARDWARE	Gaming PC with high-end graphics card, HDMI cable
AVAILABILITY/PRICE	Currently only in the developer version for USD350 (RM1,254) at oculus.com
AVAILABLE CONTENT	Numerous games, films and simulations at share.oculus.com

Oculus Rift is the pioneer of modern virtual reality goggles



HTC VIVE

AVAILABILITY/PRICE	Gaming PC with high-end graphics card, HDMI cable
AVAILABILITY/PRICE	Probably from the end of 2015. Price TBA
VERFÜGBARE INHALTE	Currently none. Will become available via the Valve Portal Steam later

HTC made a surprise announcement with the HTC Vive



SAMSUNG GEAR VR

AVAILABILITY/PRICE	Smartphone Samsung Galaxy Note 4
AVAILABILITY/PRICE	TBA
AVAILABLE CONTENT	360 degree images and films, simulations and game demos via the Oculus app among other things

The lenses of Samsung Gear VR ensure a 96 degree field of vision – just like when you look through diving goggles



The menus of Gear VR float freely in virtual space. You can navigate through the entries and select programs using a trackpad on the right side of the goggles

hardware of Note 4. As a result, there are hardly any dropped frames or other display errors. This is not true for the Pearl model, in which there always remains a slit through which one can see the surroundings - which spoils the illusion. But even the top models have a problem: although the display of Galaxy Note 4 offers the highest resolution (2560 x 1440 pixels) among the current VR goggles, it seems pixilated in parts when seen through Gear VR. This is because of the magnification of the image through the lenses, which also offer a 96 degree field of vision. According to Oculus founder Palmer Luckey, resolutions of more than 8K per eye would be an improvement.

But the illusion is so good that people love to wander away in the virtual worlds. Unfortunately they are bound to experience painful encounters with furniture in the physical world. Therefore, most applications are designed such that they can be experienced while sitting or standing in one place. If movement is involved, it is generated either via a gamepad or by fixing defined points just like in Google Streetview. The start-up Cyberinth however has developed a VR "playpen", which transfers physical movements into virtual reality (see right) without the danger of colliding.

Travelling to inaccessible places was never as realistically possible as it is today. And the technology has enormous potential that goes beyond entertainment. Customers of Audi and Volvo in South and North America get a feel of sitting in cars by means of virtual reality – and the US Army trains soldiers in the virtual space. It is just a question of time till business sectors like the travel and tourism industry climb the VR bandwagon.



Google's cardboard project is virtual reality for tinkerers: the instructions for building it and a list of materials required for making the cardboard VR goggles is given on google.com/get/cardboard



The VR "playpen" from Cyberinth transfers movements to virtual reality. The gamer can run on the smooth surface while actually standing on the same spot

The Third Eye

Unlike virtual reality, in which entire worlds are created artificially, augmented reality supplements the physical world through digital information. Contrary to virtual reality, you don't necessarily need to use goggles here – in principle, even a smartphone or tablet is sufficient. The device camera shows the surroundings on the display and connects them to content. For instance, the app Juniaio displays places of interest, restaurants and public transport stops in the surrounding areas. It shows other localities depending on the direction in which the smartphone is held. Ikea provides another AR application: if you want to know whether a shelf, table or armchair goes with the existing fixtures, you can virtually place the furniture in the room using the Ikea catalogue app before purchasing it.

The use of AR information becomes more intuitive if it is directly displayed in the field of vision of the user with the help of a mirror. The pioneer in this field was Google, who introduced the data goggle called Glass in 2012. Using a crystal prism in front of the right eye, it shows the user information such as directions, text messages and weather data. However, Glass was never really sold officially; those who wore these goggles disliked them even in the initial field tests – so much so that "glasshole" established itself a common swearword in Silicon Valley. The point that was criticised the most was that the goggle clicked pictures of the people in the area without the user's knowledge.



Sony's SmartEyeglass displays information in green font colour only. Google Glass on the other hand has a multi-colour display



We improved the look of our lunch area with a virtual armchair using the Ikea catalogue app. Augmented reality makes this possible

In January 2015, Google introduced project Glass for the first time. Despite the failure of the Google goggle, Sony wants to launch a goggle called SmartEyeglass. As per information received at the time of the copy deadline, the first developer version should be available in the market for 670 Euro plus taxes (~RM 2,738) at the end of March. But it may also face the same problems as the Google Glass. Besides, the first images also look more bulky in person. A more promising way of using smartglasses in the private sphere are situations in which one wears the glasses, for example when skiing. The Austrian skiing region Amadé is trying them out this winter; the app of the skiing region provides information such as weather data, the way to the lift or to the next shack to a special data ski glass. The glass can be rented for about 20 Euros (~RM 81) a day from all Intersport stations in the skiing area.

Augmented reality in the industry

However, data glasses show their real potential in the professional sector. In production or logistics, data glasses can show individual work steps. The person wearing the glasses need not even touch a smartphone. According to DHL, the use of Google Glass at a logistics centre in the Netherlands lead to an efficiency increase of 25 percent when gathering shipments. The employees could see where a requested item was and the quantity in which it was required. DHL reports that the glass helped prevent any possibility of error. Even the aircraft manufacturer Boeing is currently examining the use of AR glasses. The test software is being made by APX, which has worked on SmartEyeglass with Sony. 



Goodbye to slope maps: the smart ski goggle Smith I/O shows the skier the way to the next shack directly in his field of vision



In a test, DHL storekeepers received information about requested articles was displayed via Google Glass

Holograms by Microsoft

The HoloLens that was introduced by Microsoft in January is supposed to have combined virtual reality and augmented reality. Unlike in case of augmented reality, the physical surroundings are not just supplemented by digital content but also literally overlaid with it. This effect, named Mixed Reality by Microsoft, is created through the combination of cameras, sensors and special holographic lenses, in which the 3D objects are generated. However, only prototypes of HoloLens are available so far. Its final version will be a complete, portable computer. According to Microsoft, glass will be out in the market "within the Windows 10 time frame". During the presentation, Microsoft put forward certain scenarios, in which HoloLens could be used in future.

1 In the professional world, draft designs or concept studies, which are prepared on computers, can directly be projected as three dimensional models on the table with the help of HoloLens. In the example shown here, the data glass displays a motorcycle model and the buttons in front of it as a hologram.



2 HoloLens is also supposed to revolutionise communication via Skype. The image shows a woman, who is getting help for plumbing work from an expert. Her field of vision is transferred to the partner's tablet, and the partner enters the instructions in it. These instructions are again displayed three dimensionally by HoloLens in the field of vision of the woman. The chat window floats in air in front of her.



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Motherboards

Intel DZ77GA-70K
MSI Z87 MPower

Processors

Intel Core i7-3770K
Intel Core i7-4770K

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MSI GeForce GTX 980 GAMING 4G

CPU Cooler

Cooler Master X6



AMD Platform

Motherboards

ASUS Crosshair V
ASUS A88X-Pro

Processors

AMD FX-8150
AMD A8-3850

Graphics Processing Unit

ASUS Radeon R9 290X

CPU Cooler

Cooler Master Hyper 212 EVO



PSU, Storage & RAM

Power Supply

Cooler Master Silent Pro
Hybrid (1300W)

Storage

Western Digital Black²
Dual Drive
Western Digital My Book
Live Duo

Memory

Kingston HyperX
KHX1600C9D3K4/16GX
Kingston HyperX FURY
HX318C10FWK2/8
Kingston HyperX
Predator
HX430C15PBK4/16

Benchmark Software

Operating System

Windows 7 Ultimate
(64-bit)

Futuremark

PCMark 8
3DMark

Industry Standard Benchmark Tools

AIDA64
SiSoftware SANDRA
Speccy
Unigine Heaven

TEST LAB



The Technologica Crux

May has been a fairly busy month, with more phone launches than we can care to count, and preparations for the upcoming COMPUTEX event in Taiwan this month. ASUS, HTC, Huawei, Lenovo and Xiaomi all launched brand new smartphones, all with their own perks and features. I'm personally quite smitten with the Zenfone 2, which I feel is the best bang for the buck phone out there right now.

As COMPUTEX is around the corner, we also expect to see big players like AMD, Intel, NVIDIA and the rest to showcase their latest technologies, including brand new CPUs and GPUs for the consumers. We expect wearables to have quite a showing as well this year, as it seems that that is what many companies are heading towards.

This month, we've got quite a number of products in store, with several of my favourites including the Zenfone 2, the GTX 980 Gold Edition and the MSI PX60 notebook. We've also got a number of printers in our Test Lab, courtesy of Canon, Fuji Xerox and HP. Need one for your home or office? This month's Test Lab is definitely the section to look forward to.



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Ratings

Each product review is rated on a scale of 1 to 5 for different key parameters:



PERFORMANCE : Refers to the efficiency of execution
FEATURES : Rates the abilities and unique characteristics available
DESIGN : Varies according to product. Finished products - form factor and build quality. Hardware components - layout, size and cooling solution. Software - user interface
VALUE : Calculated from the performance and features of the product in relation to the price

CHIP Awards



CHIP Editors' Choice Award

Awarded to products that receive unanimous endorsement from all CHIP editors for its overall brilliance



CHIP Outstanding Award

Reserved for products that combine astute technical performance with good quality and design



CHIP Recommended Award

Given to products that possess singular quality worthy of a recommendation



Big Screen Android

Bringing innovation into spaces you never thought possible has been a forte for Sony, and with their Bravia W850C, innovation is overflowing from every angle. Not only is it slim and stylish, the W850C also features two cool innovations. The flick wireless remote enables users to control the TV with just a flick of their wrist, and Android TV brings the ever popular Android platform to Malaysian TV goers for the first time.

SONY Bravia W850C

Price: RM 5,799

Contact: Sony Malaysia Sdn. Bhd.

Phone: 1300-88-1233

Info: www.sony.com.my

A Prestigious Device

MSI has recently unveiled their latest laptop that targets business professionals and entrepreneurs, combining style and class, while maintaining their strong penchant for performance with the MSI Prestige. It comes equipped with the latest 4th generation Intel Core i7 Core processor, running on Windows 8.1. It has an embedded NVIDIA GTX 960M 2GB VRAM GDDR5 for high performance graphics rendering, and it has a 15.6-inch FHD display with Anti-Glare display - and holds up to 256GB SSD storage with 1TB HDD. Additionally, it also packs up to a maximum of 16 GB RAM.

MSI Prestige

Price: TBA

Contact: MSI Malaysia Office

Phone: 1 300 22 1386

Info: my.msi.com



Feeling Jaded

Acer brings their competitive entry level smartphones to the market with the Acer Liquid Jade Z. This device comes with a 5-inch IPS LCD capacitive touchscreen display with Corning Gorilla Glass 3. It is powered by a Quad Core 1.5GHz Cortex A53 processor while running on Android 5.0 Lollipop. It has 1GB of RAM with 8GB of storage, expandable up to 32 GB via microSD. Camera-wise, it sports a 13 MP rear camera and a 5 MP front camera.

Acer Liquid Jade Z

Price: RM 799

Contact: Acer Sales and Services Sdn.Bhd

Phone: 1 800 88 1288

Info: www.acer.com.my



Feral Power

ASUS always gets the needs of gamers and the Sabertooth X99 motherboard is further proof of that notion. This device comes with an Intel Socket 2011 v3 Core i7 Processor with the Intel X99 chipset. It supports NVIDIA Quad GPU SLI and AMD 3-Way SLI technology as well as AMD Quad GPU CrossFireX and 3-Way CrossfireX Technology. Its unique features include a Thermal Armour, TUF Components, Radar and Detective features. Its special design also allows extra dust protection on all its important ports and expansions.

ASUS Sabertooth X99

Price: TBA

Contact: Build Technology Supply Sdn Bhd., Servex (Malaysia) Sdn. Bhd

Phone: (03) 7955 3699, (03) 8024 6688

Info: www.asus.com/my/

Honourable Display

Huawei continues its tradition of providing quality smartphones at a budget economy with the Huawei Honor 4X. The smartphone comes with a 5.5-inch IPS LCD capacitive touchscreen display and runs on the Android 4.4.2 KitKat. It is powered by an octa-core 1.2GHz Cortex A53 while running on 2GB RAM with 8GB storage, expandable up to 32GB via microSD. It also features 13MP rear camera and a 5MP front camera. Additionally, the Emotion UI makes a return on this device as well

Huawei Honor 4X

Price: RM619

Contact: Huawei Malaysia Mobile Hotline

Phone: 1 800 22 0086

Info: www.huawei.com/my



Windows 10 Certified

With the release of the latest version for Windows around the corner, it is important for manufacturers to get their products certified for the new OS. MSI is the first in the market that has received certification with the H81M-P33 motherboard. With support for the 4th generation of Intel Core processors, it is also rated as a Military Class-certified board – which translates to quality materials and a stable platform.

MSI H81M-P33

Price: TBA

Contact: Media Forte (Malaysia) Sdn Bhd., JW Power Marketing Sdn Bhd., AMT PC Distributors Sdn Bhd

Phone: (03) 2287 1177, (03) 2148 1307, (03) 3344 1124

Info: my.msi.com



Focusing On Monochrom

The premium and luxurious quality camera brand Leica is back with the Leica M Monochrom digital camera. It comes with the Leica M lens mount with a full frame camera format, while supporting a CCD 23.9 x 35.8mm sensor type. It can store data with SD cards up to 2GB and SDHC at up to 32 GB. It comes with a 2.5-inch rear screen LCD display viewfinder. Features include in-camera tone changes, raw data histogram and parameter clipping warning within the LCD display.

Leica M Monochrom

Price: TBA

Contact: Leica Camera Asia Pacific Pte. Ltd.

Phone: (03) 2142 2822

Info: www.leicastore.com.my



Maximum Expandability

The sizes of data being downloaded on our mobile devices is getting larger and larger every day, and with limited phone memory, SanDisk has released their latest 200GB microSD memory card for instantaneous memory upgrade that has a large capacity. These memory cards are built to last even in extreme conditions and they are waterproof, temperature proof, shock proof, x-ray proof and even magnet proof.

SanDisk 200GB microSD

Price: TBA

Contact: M-LINK SYSTEM (M) SDN BHD, Vector Digital Sdn Bhd, Futuromic Photo AV Sdn. Bhd.

Phone: (03) 7728 9003, (03) 2143 2822, (03) 6156 6633

Info: www.sandisk.com



An Icon for Mobility

The recently launched Acer Iconia Talk S has another interesting phablet which can do both tablet and smartphone chores. It comes with a 6.9-inch 1280 x 800 HD touch screen display combined with Zero Air Gap and IPS technology. It is powered by a 64-bit Qualcomm Snapdragon Quad-Core 1.2GHz processor while running on 1GB of RAM and 16 GB of storage. It is also running on Android 4.4.2 Kit Kat.

Acer Iconia Talk S

Price: RM 799

Contact: Acer Sales and Services Sdn.Bhd

Phone: 1 800 88 1288

Info: www.acer.com.my



Creativity Done Right

Fujifilm are no amateurs when it comes to cameras, and they are proving it with the Fujifilm X-T10. This digital camera comes with 16MP X-Trans CMOS II with primary colour filter and a sensor cleaning system while the lens mount uses FUJIFILM X Mount. It has sensitivity settings which can go up to ISO 6400 with extended output up to 512000. It features dials for enhanced operability, a 920K-dot tilting LCD and a film simulation called Classic Chrome as well as a real time viewfinder.

FUJIFILM X-T10

Price: TBA

Contact: Fujifilm (Malaysia) Sdn. Bhd.

Phone: (03) 5569 8388

Info: www.fujifilm.com.my

To Infinity and Beyond

A new wave of products are coming on Disney's Best Selling video game series, Disney Infinity, with the latest to join the series being the Star Wars expansion set. Disney Infinity is the only platform whereby one can play characters from Disney, Pixar, Marvel and Star Wars all in one. Disney Infinity is available on the Playstation 4 and 3, Xbox 360, PC and Nintendo systems.

Disney Infinity Starter Pack

Price: USD 64.99 (RM234)

Contact:

Phone:

Info: www.disney.com/infinity



Productivity On the Go

Modern road warriors would need a portable yet productive device to work on and the Acer Aspire E5-573G-78F6 laptop is the way to go. It comes with a 15.6-inch HD 1366 x 768 LED display and is powered by an Intel Core i7-5500U processor. It runs on 8GB RAM with a total storage of 1TB SATA HDD and is equipped with the NVIDIA GeForce 940M with 2GB VRAM. Additional features include Acer Crystal Eye HD Webcam, Bluetooth 4.0 and Gigabit Ethernet.

Acer Aspire E5-573G-78F6

Price: RM2,999

Contact: Acer Sales and Services Sdn. Bhd.

Phone: 1 800 88 1288

Info: www.acer.com.my



A Small Apple

Apple needs little introduction but their latest 12-inch Macbook might. It comes with a 12-inch Retina Display and features a 512GB PCIe-based on-board flash storage. It is powered by a 1.2GHz dual-core Intel Core M processor that can be turbo boosted up to 2.6GHz and runs on 8GB RAM while performing on the Intel HD Graphics 5300. Additionally, it comes in three colours - silver, gold and space grey.

Apple Macbook

Price: RM5,829

Contact: Apple

Phone: 1-800 803 638

Info: www.apple.com/my

Personally Small

Xiaomi has rocked the world with their cheap and amazingly powerful smartphones and tablets but their latest product, the Mi 4i promises all that and more. This smartphone comes with a 5-inch IPS LCD capacitive touchscreen with MIUI 6.0 and is powered by a second generation Qualcomm Snapdragon 615. It has 2GB RAM and 16 GB and has no expandable slots for memory. It also features a 13MP rear camera and 5MP camera. Some new features include Sunlight Display which allows you to view the display even under harsh sunlight as well as a beauty mode that enhances your pictures as you take them.

Xiaomi Mi 4i

Price: RM749

Contact: Xiaomi

Phone: 1 800 28 1882

Info: www.xiaomi.com/my



A Titanium Titan

Olympus is back with a new photography device with newer features in the form of the OM-D EM-1 Titanium. It comes with a 17.3mm x 13mm screen with Micro Four Thirds Mount while its image sensor is a 4/3-inch Live MOS sensor which provides up to 16.28MP. Its image sensor is also dustproof thanks to its Supersonic Wave Filter. It also comes with a 3-inch tilting LCD monitor with touch functions.

Olympus OM-D EM-1 Titanium

Price: RM7,199 (with M.Zuiko PRO lens)

Contact: Olympus (Malaysia) Sdn. Bhd.

Phone: (03) 6411 0000

Info: www.olympusimage.com.my

Selfie in Style

If there is one thing that has continued to stay in trend recently, is the consistent force of the selfie, and CliqueFie has recently revealed its chic selfie stick the CliqueFie Max. This selfie stick comes with a polarised stainless steel pole for maximum length and an intuitive yet easy to use phone mount. It also comes equipped with a detachable Bluetooth feature allowing you to take pictures using the handle or detached away from it with a max range of 10m. Additionally, it also comes with a spring loaded detachable tripod for wide angle shoots.

CliqueFie Max

Price: TBA

Info: www.cliquefie.com



The 4K Enabler

The Panasonic LUMIX G7 is one of the few digital cameras that allow you to record in 4K resolution. This device comes with 16MP Live MOS sensor and supports a wide range of image formats and files. It comes equipped with Wi-Fi and QR Code connection while providing a contrast AF system and an OLED Live View Finder. It features a high speed auto focusing with DFD technology to capture fast moving action.



Panasonic LUMIX G7

Price: TBA

Contact: Panasonic Malaysia Sdn Bhd

Phone: (03) 5543 7600

Info: www.panasonic.com.my

Savvy Mice

Logitech has recently launched some fun and vibrant mice as part of its 2015 Logitech Play Collection which features the face of friendly characters and geometric shapes. It has a long lasting battery life of 12 month without battery switches which gives you carefree usage as well as an integrated smart sleep mode and a battery indicator. It also has a long wireless range of up to 10 metres which gives you ample room to manoeuvre around.

Logitech M238

Price: RM69

Contact: Ingram Micro Sdn Bhd., MCL Sdn Bhd., M-Link Sdn Bhd., Kaira Technologies Sdn Bhd

Phone: (03) 7955 8188, (03) 8023 3800, (03) 7728 9003, (03) 7955 3669

Info: www.logitech.com/en-my



Dell OptiPlex 9020 Micro

Price TBA
Info Dell Asia Pacific Sdn Bhd
Phone 1 800 88 0301, 1 800 88 2888
Contact www.dell.com.my

Specifications

Operating System: Windows 7 Pro
Processor: Intel Core i7-4785T
Graphics: Intel HD Graphics 4600
Connectivity: 6x USB 3.0, DisplayPort, Ethernet
Memory: 4GB
Storage: 1TB HDD
Dimensions: 142 x 69 x 360 x 175 x 417 mm
Weight: 940g

RATINGS

Performance	
Features	
Design	
Value	

Small
Large storage space
 None



BENCHMARK RESULTS

PCMark 8 Home: 2,915 points
PCMark 8 Work: 3,012 points
PCMark 8 Creative: 2,785 points



Behind the device are the range of connectivity options such as USB 3.0 ports, audio and video outputs



On the front end of the device are two more USB 3.0 for convenience and the power button



Keeping The Office Smaller

The new Dell OptiPlex 9020 Micro keeps things small but productive in the office environment

By Nicolas See Tho

The future would soon see the normal office scene changed whereby instead of mountains of desktops, we would soon be experiencing the miniaturised power of form factors such as the Dell OptiPlex 9020 Micro.

This mini PC comes with the full set, such as a wired keyboard and mouse for use which only leaves a monitor to start using immediately. It has six USB 3.0 ports for multiple devices as well as a DVI and DisplayPort for external display. It also has an additional option to add an additional HDMI or DisplayPort to give a total of maximum three monitor support. On its front, it sports the usual audio and microphone jack.

This mini PC comes with a full range of Dell Data Protection security options such as encryption across all endpoints, security tools for identity protection through authentication support and a hardware encryption accelerator. It also comes with a micro VESA mount option which allows you to tuck this PC under your work desk

to provide more space as well as a cleaner looking desk. This device also comes with all the Dell OptiPlex management features.

When it comes down to working on this device, we find that the mini PC handles itself well. It has scored good marks in our benchmark tests such as PCMark 8. Its large storage space also proved handy as you can transfer huge data without worrying about disk space. The device runs silently even when under heavy load which is a must in office environments. Graphic wise, it may not be able to handle any graphic intensive programs but it can run movies and HD videos without much troubles.

CHIP CONCLUDE :

The Dell OptiPlex mini PC is a heaven sent device for offices looking to reduce space yet maintain their high standards of work quality. While it may look small, it definitely packs a punch in the performance department.



A Great Honor

The new Honor flagship is a beast - both in performance and battery life

By Sharil Abdul Rahman

About a year ago, Huawei made the executive decision of spinning off a part of their mobile division and renaming it as 'Honor'. The aim of this sub-brand is to bring affordable but powerful smartphones to the masses. This can clearly be seen with their latest model - the Honor 6 Plus.

Considered as an upgrade to their Honor 6 model, the 6 Plus nevertheless brings a few new party pieces to the game and those said party pieces are significant upgrades to the predecessor. Underneath that 5.5-inch screen is Huawei's own chipset - the Kirin HiSilicon 925. This is one of the few smartphones out there that is not using either a Qualcomm or a Mediatek processor. While one may scoff at the idea of a phone company making their own chipset, the HiSilicon Kirin is a workhorse, running eight cores out of the box.

You also get 3 GBs of RAM and 32GB of storage - specs that are usually exclusive for high-priced flagships phones only. Running with the 3GBs of RAM really makes a difference, as lack of running memory is no longer an excuse.

As stated before, the Honor 6 Plus

comes with a 5.5-inch screen that features a 1080p panel. This screen can be colour customised, as there is a settings built-in the OS that allows users to change the temperature of the screen with a slider - you want a cooler or hotter screen? slide left or right.

The crowning glory of the 6 Plus is the dual-lens camera at the back. It takes either 8 megapixel or 13 megapixels maximum when both sensors are used. The twin-sensor setup also allows depth data be captured while taking photos, so you can create those 'bokeh'-like effects easily.

Using the Honor 6 Plus as a daily driver, we did not run into any serious problems. Apps runs smoothly and thanks to the large 3000 mAh battery, we can get full daily usage with it. On average, we managed to clock in almost 13 hours of continuous usage, while using it on a moderately heavy usage (50% screen brightness, Wifi + 4G on).

CHIP CONCLUDE :

A new option for those who are looking for flagship-level phones on a budget.

Honor 6 Plus

Price RM 1,399
Contact Huawei Honor Malaysia
Phone 1800-223366
Info www.vmall.my

Specifications

Display: 5.5 Inch 1080p
Processor: Huawei HiSilicon Kirin 925 octa-core
Connectivity: GSM/HSPA/LTE, Bluetooth, 802.11 a/b/g/n
Memory: 3GB
Storage: 32GB + microSD up to 128GB
Operating System: Android-based Emotion UI 3.0 (v4.4.2)
Camera: Dual 8 megapixel
Dimensions: 150.5 x 75.7 x 7.5 mm
Weight: 165 grams

RATINGS

Performance



Features



Design



Value



+ Innovative dual-sensor camera
 - Incredibly battery life

- Plastic build
 - No image stabilisation



BENCHMARK RESULTS

3DMark:	
Ice Storm:	Maxed Out
Ice Storm Extreme:	9,211 points
Ice Storm Unlimited:	13,957 points
PCMark for Android:	2,842 points
Antutu:	44,398 points



Check out the dual camera sensor at the back

Lenovo ThinkCentre Tiny PC M73

Price RM 2,309
Contact Lenovo Malaysia
Phone 1 800 80 8575
Info www.lenovo.com/my/en

Specifications

Operating System: Windows 8.1
Processor: Intel Core i7-4785T
Connectivity: USB 2.0 x4, USB 3.0 x2, DisplayPort 1.2 x1
Memory: 12GB DDR3 RAM
Storage: 500GB SATA III HDD
Others: SD Card reader

RATINGS

Performance	██████
Features	██████
Design	██████
Value	████

 Great performance in a small footprint. Productivity focused design
 Hard to reach ports



BENCHMARK RESULTS

PCMark 8 (Home): 4,215 points
PCMark 8 (Creative): 4,169 points
PCMark 8 (Work): 4,351 points



The PC actually slips behind the monitor.



You also get two USB 3 ports at front.



The Tiny PC That Can Do Big Things

Lenovo's new AIO ticks all the right boxes

By Nazrin Zain

One major hurdle that companies seem to face quite frequently is the need to refresh office hardware every once in a while. Replacing entire units of computers can appear to be quite troublesome, and repairing components will still cause a considerable amount of downtime to users that sometimes is quite difficult to tolerate. Lenovo, with its ThinkCentre Tiny PC M73 may just be the solution that companies are looking for.

At first glance, and several glances afterwards, in fact, you would think that the Tiny (that's what Lenovo is calling it) is an AIO computer, and technically, you wouldn't be all that wrong. What Lenovo has done with this particular computing solution is to use the display base as a docking solution. The "PC" portion of the Tiny is akin to an NUC unit that utilises the large 24 inch screen dock to output the display.

This variant of the Tiny we received is powered by an Intel Core-i7 processor, with 16GBs of RAM and 500GBs of storage space, running Windows 8.1 operating system. The screen dock essentially turns the Tiny into an AIO computer, and is also decked with I/O options such as USB ports and headphone and microphone ports.

As you can tell from the specifications, the performance of the Tiny is simply top-notch. Powered by a powerful processor and a lot of RAM, the Tiny is a workhorse in a compact form factor, housed in an all-in-one solution.

Regardless if you're coding, crunching numbers, encoding a video or doing graphic design work, the Tiny breezes past these tasks with ease with juice to spare to do other things like watching HD videos simultaneously with no problem.

Besides being able to unhinge itself from the AIO dock, the Tiny also has an interesting feature, whereby if you plug in your keyboard to a specific USB port, you can simply use the keyboard shortcut Alt+P to turn on the computer, even when it is shut down. 

CHIP CONCLUDE :

As a work machine, the Lenovo ThinkCentre Tiny PC M73 is definitely one of the best work machines we've used. IT technicians would definitely appreciate the simple hot-swap capabilities the Tiny AIO offers, and employees will certainly love its no-compromise performance.



An Atmospheric Affair

A surprising entry by Lenovo, and a value-add device, thanks to the Dolby Atmos feature *By Nicolas See Tho*

Lenovo had recently been releasing affordable smartphones with considerable amounts of performance throughout the recent year and a half, but the Lenovo A7000 looks to be the prettiest by far. This device aims at conquering the entry level smartphone market with the first ever Dolby Atmos sound system integration within the device.

The device has a sleek looking IPS panel display while sporting the usual fanfare such as microUSB ports and audio jacks. Behind the phone the speaker is located at the lower half of the device while the camera is placed on the upper left. If you take out the back casing, the phone shows support for Dual-SIM as well as an expandable microSD card slot.

This smartphone has an incorporated Dolby Atmos sound integration which delivers rich and immersive sound experience. It also features a 13 MP rear and 5 MP front camera which provides beautiful selfies and photo taking capabilities. Additionally, it also comes LTE ready thus able to deliver those fast network speeds wherever you go. For those who are constantly switching

between phones, this device comes Dual-SIM ready thus relinquishing the use of your secondary phone.

One of the first things we noticed during our review is how smooth the device runs. During our benchmark tests with AnTuTu and 3DMark, it has scored above the average. The low internal storage however becomes a hassle early on as after factoring in bloatware and such, you would only get 5GB of internal storage meaning very few movies or videos as well as games. Battery-wise, the device can last you throughout the day under average use which involves checking emails, web browsing and messaging with calls.

CHIP CONCLUDE :

In conclusion, the Lenovo A7000 is a rather attractively priced smartphone with some surprising capabilities as well as good performance to boot. Those looking to get an entry level device would do good to check out this smartphone.

Lenovo A7000

Price RM699
Contact Lenovo Technologies Sdn.Bhd
Phone 1 800 80 8575
Info www.lenovo.com/my/en

Specifications

Network: GSM/HSPA/LTE
Display: 5.5-inch IPS capacitive touchscreen
Processor: Mediatek MT6572m Octa-Core 1.5GHz Cortex A53
Connectivity: Wi-Fi 802.11ac, Bluetooth 4.0, microUSB 2.0, FM Radio, GPS
Memory: 2GB
Storage: 8GB
Operating System: Android 5.0 Lollipop
Camera: 8MP rear, 5MP front
Dimensions: 152.6 x 76.2 x 8 mm
Weight: 140g

RATINGS

Performance	
Features	
Cooling	
Value	
	Beautiful display Smooth performance
	low internal storage



BENCHMARK RESULTS

3DMark Icestorm Unlimited: 5,983 points
3DMark Icestorm Extreme: 9,144 points
PCMark for Android: 4,116 points
AnTuTu: 40,509 points



Behind the battery casing, the device has a microSIM slot that supports LTE connectivity



The Lenovo A7000 has an 8MP rear camera which takes some beautiful shots

Elysium Porto V

Price RM 999
Contact Leapfrog Distribution Sdn Bhd
Phone (03) 7803 6703
Info leapfrogglobal.com/amg/

Specifications

Driver size: Full Range (2x 10W)
Impedance:
Ports: USB 2.0, 3.5mm auxiliary
Connectivity: USB 2.0, NFC, Bluetooth

RATINGS

Performance



Features



Design



Value



Audio quality
Features



Heavy
Expensive



Big Speakers, Big Sounds

Elysium's Porto V speakers are great for parties and outdoor occasions *By Nazrin Zain*

Audio products have improved a lot of late, with manufacturers starting to make devices that not only look good, but also perform great as well. One such company is Elysium, and as you may remember, we've reviewed a number of their audio products before. One of the latest products on their list is the Elysium Porto V, a boombox-like wireless speakers.

The Porto V comes in a variety of colours, including white, brown and black, and out of the box, the product certainly is quite big and heavy. Internally, it has two 10W drivers, and at the top are touch inputs for play, pause and volume controls, as well as a Bluetooth switch to connect to devices.

At the sides are the power output, a USB port for charging devices, and a 3.5mm audio port, which can be used to connect to the Porto V. If you're thinking of using the Porto V as a wireless audio speakers, you're also in luck because its built-in battery can run for about seven to eight hours on a single charge.

As mentioned before, the Porto uses NFC and Bluetooth connectivity to connect the music players to the speakers. If wireless connection is not your thing however, you can also opt to use a 3.5mm audio cable to connect to the Porto V with no issues.

As far as music quality is concerned,

the Porto V is an excellent playback device. The audio quality is clean, crisp and has an excellent tonality to it, despite not having any bass drivers. In some cases where you're playing bass-heavy songs, this is noticeable, but otherwise, the other songs we tested it with sounded like they're intended.

The WiFi range for the Porto V is excellent as well, as we're able to play songs from several metres away with no issues. The touch panel at the top of the Porto V is also fairly straight forward and easy to use, although admittedly there are times we'd much prefer to have physical buttons instead.

One gripe we do have with regards to the device is that it is quite difficult to lug around, because it is quite heavy. That being said, it is quite loud, and is a perfect accompaniment to any party or outing in large, open spaces.

CHIP CONCLUDE :

The Elysium Porto V is an excellent set of speakers that produce loud, amazing sounds. With NFC and Bluetooth connectivity, you can connect your mobile devices and play songs back just like that, without the need to install apps or complicated methods.



There is a USB port - sadly it is only for charging purposes



NFC is useful for one-tap pairing with the Porto V



Samsung's A-Grade Tab

The Samsung Galaxy Tab A is more than just a tablet

By Nazrin Zain

Samsung sure does love its tablets, and after the launch of the company's Galaxy S6 and S6 edge smartphone devices, they also unveiled a couple of new slate devices in the form of the Samsung Galaxy Tab A.

Available in two sizes; 8.0 inch and 9.7 inches, the Tab A is powered by a 1.2GHz quad-core CPU, alongside 2GB of RAM and 32GB of storage, which is expandable via microSD, up to 128GB, running Android 5.1 Lollipop. The model they passed to us to review is the 8.0 inch model, and the display is a TFT capacitive display with a screen resolution of 768x1,024 pixels.

It also comes with a SIM card slot and LTE connectivity, which is great if you're constantly on the move, and don't want to have to rely on WiFi connection. In typical Samsung fashion, the Tab A also comes with the S Pen digitizer, which allows you to use a number of interesting features on the tablet, including writing, drawing and even as a way to select multiple items for moving or deleting purposes.

Performance-wise, the Tab A performs well enough without any noticeable lag, and does most, if not all that you need it to do exceptionally well. Throughout our tests, the tablet rarely heats up to uncomfortable levels, and you can usually

only tell that it's getting warm when it's running processor or graphic-intensive tasks like playing games or watching HD videos for long periods of time.

Battery life clocks in at an impressive eight to nine hours long, which is great for a tablet of this size, as it can function as a portable entertainment device that lasts for quite some time. The Tab A can also left in standby mode for a long period of time, without the need to keep it charged for days.

Samsung also made sure that those who own a Tab A are treated to a wholesome array of apps and services, as the tablet comes pre-loaded with a number of freebies, including a free six-month subscription to The Economist, a 12-week subscription to The New York Times, and a monthly free e-book download via the Kindle For Samsung app.

CHIP CONCLUDE :

The Samsung Galaxy Tab A is a great tablet for both work and play, but above that, it features special device-only content that makes full use of the tablet's features and display real estate to ensure a very wholesome experience.

Samsung Galaxy Tab A

Price RM1,299
Contact Samsung Malaysia Electronics Sdn Bhd
Phone 1800 88 9999
Info www.samsung.com.my

Specifications

Display: 8.0 inch TFT Touch Screen Display
Processor: 1.2GHz Quad-Core Processor
Connectivity: WiFi, 3G, LTE, Bluetooth
Memory: 2GB
Storage: 32GB expandable via MicroSD (128GB)
Operating System: Android 5.1 Lollipop
Camera: 5.0MP
Dimensions: 208.3 x 137.9 x 7.4 mm
Weight: 313g

RATINGS

Performance	
Features	
Design	
Value	

Good performance
 Great extra features and freebies
 Camera

BENCHMARK RESULTS

3DMark Icestorm Extreme:	2,612 points
PCMark for Android:	2,064 points
AnTuTu:	22,125 points



The SIM and microSD sits behind fiddly doors



The stylus - same as the Note series - has its own silo in the tablet

Sony Z3 Tablet Compact

Price RM 1,799
Contact Sony Malaysia
Phone 1300-88-1233
Info www.sony.com.my

Specifications

Display: 8 inch @ 1200 x 1920 pixels
Processor: Qualcomm Snapdragon 801
Connectivity: 2G/3G/4G LTE, Wifi, Bluetooth 4.0,
Memory: 3GB RAM
Storage: 16GB, expandable to 128GB with microSD
Operating System: Android Kitkat 4.4.2, with v5.0 upgrade in the pipeline
Camera: 8.1 megapixel (back) 2.2 megapixel (front)
Dimensions: 213.4 x 123.6 x 6.4 mm
Weight: 270 grams

RATINGS

Performance	
Features	
Design	
Value	

Thin design
Fast processor
Sharp & crisp screen
 Small initial storage



BENCHMARK RESULTS

3DMark:	
Ice Storm:	Maxed out!
Ice Storm Extreme:	Maxed out!
Ice Storm Unlimited:	17,692 points
PCMark for Android:	3,711 points
Antutu:	42,362 points



Fiddly door that is thankfully only opened when you need to change SIMs or add microSD



Thin Yet Powerful

A great on-the-go companion for power users

By Sharil Abdul Rahman

Who would have imagined that a tablet can be your main communications device. Before, a tablet is something that you use to just browse websites and perhaps watch videos. Today, many of us are nonchalantly using tablets as phones and even recording devices for memories. So why not have a good one if you are investing in it right? Hence why Sony introduced their latest tablet in the market – the Xperia Z3 Tablet Compact.

From first looks, it is unmistakably part of the Xperia family. The Sony design that has been used practically in the whole Xperia line is obvious here. This includes the ability to keep water and dust out of the insides. Yes, the Z3 Tablet Compact is both water and dust resistant. So you can bring into your shower, or perhaps to the pool/seaside without any adverse problems.

The large 8-inch display features a Full HD display so multimedia playback on it is a joy to see. Plus, the Triluminos display technology also helps in enhancing colour reproduction on screen so your videos and pictures will pop up more on screen.

Underneath the shatterproof glass is Qualcomm's Snapdragon 801 chip running

at 2.5Ghz. This chip is beefy enough for anything you can throw at it – be it 3D games, full HD movies – or even streaming both game and video content via MHL or wireless connection to a big screen.

With 3GB of RAM and 16GB of storage (that can be expanded through the microSD slot – up to an additional 128GB) – it is no slouch in performance. This is reflected in the scores we got through 3D Mark, PCMark and Antutu. While it is not at the top of the chart – it is definitely in the top ten.

Using the Z3 Tablet Compact as a daily driver is sort of a mixed bag – due to the sheer size of the device. Sony has done well to minimise the bezel around the screen and kept the device size on the smaller side, but it is still a tablet, and weird looks will be given when it is taken out for calls. It is however the perfect size for consuming web content or reading e-books/comics – plus the low weight allows it to be handheld in one hand for long periods of time.

CHIP CONCLUDE :

A great tablet for on the go usage. The thin size and low weight helps as well.



Flip and Switch It Around

Acer's bigger Switch proves that good design can be made better *By Sharil Abdul Rahman*

2-in-1 is fast becoming a growing market in the PC industry. Thanks to new chipsets such as the latest generation Atoms and also the new Core M processors from Intel - it is now a design that many want to own and purchase. Acer has invested in the new Core M processor and came out with a member of the Switch family featuring the Core M - the new Switch 12.

As the name implies, the Switch 12 can switch its form factor to fit certain needs - depending on the situation. Like the smaller brother, the Switch 12 features detachable parts - in this case the keyboard. Thanks to this multi-mode, it can be reconfigured into five different form factors - a standard notebook, tablet, tent, picture frame and a desktop mode.

It has an Intel Core M-5Y10C processor that runs at 800 MHz, with a burst clock speed of 2GHz. It also comes with 4GB of RAM, and up to 128GB of storage. This is all paired with a 12.5-inch touchscreen that supports 10-finger multi-touch.

The keyboard is a detachable Bluetooth keyboard, that can be used while docked to the front of the Switch 12, or separately - like how you would use a computer on a desktop. It attaches to the kick-stand

which also houses the charging pins for the keyboard. No external USB charging for this. Also, Acer has included a pointing stick and mouse buttons for times you need more precision

In terms of connectivity - the Switch 12 has similar ports complements like most Core M 2-in-1s - USB 3.0, microHDMI and microSD slot. What differentiates the Switch with the rest is the inclusion of a full-sized USB 2.0 port on the right-side of the kick stand. Great Scott!

One design feature of the Switch 12 that may confuse and turn away consumers is the reverse clamshell form factor. When detached from the keyboard, the Switch can stand up like a photo frame, but it cannot fold onto itself - making sure that the display up front is always exposed. Thankfully Acer has opted to lay over Corning Gorilla Glass 3 for display, to prevent scratches and nicks from happening. As it is, the Switch 12 is a worthy contender to the 2-in-1 market. 

CHIP CONCLUDE :

This is a great machine for those who wants to have an all-in-one device for work, play and everything in between.

Acer Switch 12

Price RM 2,499
Contact Acer Sales and Services Sdn.Bhd
Phone 1 800 88 1288
Info www.acer.com.my

Specifications

Operating System: Windows 8.1
Display: 12.5" Touch TFT LCD with IPS
Processor: Intel Core M 5Y10c
Connectivity: 820.11 a/b/g/n, 1 x USB 3.0 type B, 1 x USB 2.0 Type A
Memory: 4GB
Storage: 128GB
Others: 1 x microSD Slot, Detachable Bluetooth Keyboard
Dimensions: 317 x 220.6 x 16.5 mm
Weight: 1.4KG

RATINGS

Performance	   
Features	  
Design	 
Value	

 Slim and light
 Convenient multi-mode
 Full size USB

 Uncovered screen
 Average battery life



BENCHMARK RESULTS

3DMark:	
Fire Strike:	386 points
Sky Diver:	1,563 points
Cloud Gate:	3,016 points
PCMark 8:	
Home:	2,009 points
Creative:	1,858 points
Work:	2,435 points



The keyboard docks at the back of the machine

HP Officejet 7612 Wide Format All-in-One

Price RM899
Contact Hewlett-Packard (M) Sdn. Bhd.
Phone 1 800 22 6998
Info www.hp.com/my

Specifications

Type: Inkjet
Max Paper Size: A3+
Max paper count: 250
Scanner: Yes, 1200 DPI
Connectivity: 1x USB 2.0, Ethernet, Wi-Fi 802.11 ac
Dimensions: 616 x 798 x 303 mm
Weight: 17.5kg

RATINGS

Performance	██████
Features	██████
Design	██████
Value	██████

 **Multi-purpose**
Fast printing
Large paper tray capacity



 **Bulky**



This printer comes with a touchscreen menu Panel for easy navigation



This printer uses HP original inks which gives a longer lasting quality as well as resilience



A Printing Titan

Printing made easy with the new HP Officejet 7612 All-in-one Printer *By Nicolas See Tho*

As technology continues to advance, the office has to evolve as well and that means merging three different devices into one to provide an all in one capability, and what better way to do that than with the HP Officejet 7612 Wide Format All-in-One inkjet printer.

The printer comes in an intimidatingly sized box which takes some manhandling to install, but after installation, everything else is just plug and play. The package comes with the HP Drivers for the printer as well as two different power cables for 3-pin and 2-pin outlets as well as a USB cable to connect to your PC.

One of the first feature that you would notice would be the large paper feeder which is capable of holding 250 sheets of paper. It also utilises original HP inks which delivers fast drying and water resistant documents while doing so at a low cost yet professional grade quality. The printer also comes with a wide range of connectivity options such as wireless printing and mobile printing. Additionally, it is also easy on the environment as it has an automatic

two sided printing mechanism which can provide up to 50 percent of paper savings while saving energy with the pre-set Schedule system which lets you time when you need the printer the most.

Printing with this device is extremely gratifying as during our tests, we find that the printer is able to churn out text documents fast and efficiently while the print quality shows minimal ink bleeds while the colour prints display proper and accurate colouring. The printing over the air via wireless is also done without any hassles while the automatic double sided paper feeder makes paper printing all the more easier. 

CHIP CONCLUDE :

The HP Officejet 7612 Wide Format e-All-in-One is a powerful printer for all your office needs, and it also comes attractively priced. So for those looking to free up some space in your office, this might be the device that can solve your problems.



Wide, Wide Screen

Affordable ultrawide is now in our reach, thanks to LG

By Sharil Abdul Rahman

The biggest complaint for desktop users is that they don't have enough screen real estate. Even with the current Full HD range of monitors available in the market, there are times when you just need that extra few pixels for you to fully comprehend the data you are reading on screen without scrolling (or see that one enemy inching towards you in a game). That is why you should check out the LG 29UM57 UltraWide Monitor.

Out of the box you will be overwhelmed by the monitor, if you are so used to the standard 16:9 monitor ratio that is so popular now. Instead, LG is suing the less popular 21:9 screen ratio – so the 29UM57 has a 2560 x 1080 pixels screen. Yes it is still considered Full HD – just that it is extra wide. The power adaptor for the monitor is thankfully a small one.

You get two HDMI for your image input needs, and even an audio out jack for you to plug in your headphones for audio over HDMI. Other than that the monitor is bare without any frivolous features. You control the On Screen Display (OSD) panel via the multi-function D-Pad – positioned at the bottom-centre of the monitor.

Using the monitor is great, with some

caveats along the way. Thanks to the 2560 x 1080 pixels resolution screen, you get more screen for your buck. In fact, the difference between 1920 and 2560 pixels is best showcased in excel – you get to see up to 20% more columns with the latter to compare to the former resolution.

Gaming with the 29UM57 is also a joy, as it comes with a built-in gaming screen profiles – with different profiles available for FPS and RTS, due to the nature of movements in the two game genre. Using the D-pad, you can easily select the mode for your preferred genre – or adjust the screen to suit your needs. You can even, with the help of LG's software, split the screen into four quadrants for programs to use the real estate fully.

The only problem we had was an optical illusion – because of the extra width, some parallax will appear when you use it for long periods of time. This is negated by the best bit of the monitor – the price!

CHIP CONCLUDE :

A great investment to introduce ultra-wide workspace into your workflow.

LG 29UM57

Price RM 1,099
Contact LG Electronics (M) Sdn. Bhd.
Phone 1800-822-822
Info www.lg.com/my

Specifications

Display Size: 29"
Resolution: 2560 x 1080 pixels
Connectivity: 2 x HDMI
Refresh Rate: 60Hz
Touch: No
Aspect Ratio: 21:9
Dimensions: 796 x 387 x 125 mm
Weight: 7KG

RATINGS

Performance	
Features	
Design	
Value	
	Wide screen Multiple inputs Bright VESA mount No touch screen



It has a very slim profile



You can see the two HDMI ports and audio out

Liva X

Price TBA
Contact Ingens Sdn Bhd
Phone (03) 7688 9888
Info www.ecs.com.tw

Specifications

Operating System: None
Processor: Intel Celeron N2808
Connectivity: 1 x UBS 3.0, 2 x USB 2.0, Gigabit LAN, HDMI, VGA
Memory: 4GB
Storage: 64GB
Others: WiFi/Bluetooth
Dimensions: 135 x 83 x 40 mm
Weight: 190 grams

RATINGS

Performance	
Features	
Design	
Value	

Small & compact
 VESA mounting plate
 Windows 10 support

Enough power for productivity only



BENCHMARK RESULTS

3DMark:	
Cloud Gate:	1,160 points
Sky Diver:	514 points
PCMark 8:	
Home:	1,132 points
Creative:	892 points
Work:	3,070 points



A complete selection of part for computing



X marks the spot

Liva X brings simple productivity in a single box

By Sharil Abdul Rahman

A lot of the times what we really need in a computer is simple - surf the web, open a Word document, maybe chat online. Perhaps a short session of Skype. We do not need to have the latest eight-core behemoth to do that right? Hence why ECS created their small computer - the Liva X.

In something that is as small as an external hard disk, the Liva X is a fully featured computer. All you need really is to install an operating system (preferably one that supports UEFI) and boom - you get a PC that you can literally put behind your monitor. In the box, ECS fitted a Baytrail-based Celeron processor, that is a dual-core version for somewhat smooth daily performance.

You will also get 4GBs of RAM, and 64GB of on-board storage. That is more than enough for you to install your OS, productivity suites and even a simple game or two. To complement the memories, the Liva X has three USB ports - two USB 2.0 and a single high speed USB 3.0. Sadly the ports are all on the front of the chassis. At the back you get a VGA port, HDMI port, Gigabit LAN and the power socket. Unlike the previous Liva, the X needs more power

so it can't run from USB. It also comes with built-in WiFi and Bluetooth - so you can wirelessly control the X via Bluetooth keyboard and mouse.

Of course you have to set your expectations when running the Liva X. It will not be your supercomputer. However when you need it for productivity purposes - it is more than enough for that particular task, which is reflected in our PCMark Work tests. It also can handle 1080p video decoding - so you can have it as your living room media player.

We did run into some problem when running multiple tabs and explorer windows at the same time on the desktop. This is maybe due to the Celeron processor, which while is based on the Baytrail platform, but it has some problem processing as while it is a dual-core processor, it does not support hyperthreading.

CHIP CONCLUDE :

Perfect for the reception desk, medium productivity and anyone looking for a small PC for the house. Don't expect miracles though.



Flexing The Audio Muscles

If there is one thing an audio device needs to provide a satisfactory performance outdoors is it would be raw power, and the TDK Trek Flex proves to be a formidable Bluetooth speaker. *By Nicolas See Tho*

As more of us are becoming more mobile and less stationary, the need for a powerful audio device to take with us on the go becomes more necessary than ever before. The TDK Trek Flex becomes the next best thing when it comes to portable audio that delivers as it can change silent moments to animated and vibrant moments.

The speaker comes in a rugged looking cylinder body which has encompassing metal grilles. On the top side of the device, it has a control panel which allows you to change the volume, setup the Bluetooth connection and receive calls. The speaker can be placed standing to save space, or placed horizontally for an even sounding base. The back of the device reveals a rubber flap that protects the microUSB, auxiliary and power button.

One of the main features on this device is its ability to fire sounds at a 360 degree angle thus providing a room or area with any soundtrack or movie audio that you wish to play thus reducing the

need for multiple speakers while being portable. It is also able to withstand the different external environmental factors such as rain and dust providing users with a hardy and reliable outdoor audio device.

When it comes to delivering the power of your favourite music, this device does not disappoint. It has sufficient mid and highs to accommodate even the more nit-picky audio group categories while the Bluetooth connectivity on the device also proves to be strong, as we managed to get a good stream even when we placed the source at different rooms. Battery life is also a plus as we managed a well performed seven hour run, without pause. □

CHIP CONCLUDE :

The TDK Trek Flex is definitely worth the price it is set at, as not only does it give powerful portable audio but it is also rugged and hardy in outdoor conditions.

TDK Trek Flex

Price RM399
Contact Digital Paper Sdn Bhd
Phone (03) 5569 2002
Info www.tdkperformance.com

Specifications

Driver size:
Impedance:
Ports: microUSB, Auxiliary port
Connectivity: Bluetooth 4.0
Dimensions:
Weight:

RATINGS

Performance



Features



Design



Value



+ Portable
 360 degree sound
 Weatherproof

- None



Behind the device are the microUSB, power ports and the audio-in ports



The control panel is located on the top of the device which changes volume, and allows for Bluetooth connection

ASUS GTX 980 20th Anniversary Gold Edition

Price RM3,179
Contact Build Technology Supply Sdn Bhd., Servex (Malaysia) Sdn. Bhd
Phone (03) 7955 3699, (03) 8024 6688
Info www.asus.com/my/

Specifications

GPU: GTX 980
Memory: 7010MHz GDDR5
Ports: DVI x1, HDMI x1, DisplayPort x3
Slot Size: Single/Double/Triple
Dimensions: 297.2 x 152.4 x40.6 mm

RATINGS

Performance	
Features	
Design	
Value	
Performance	
Features	
Design	
Price	

BENCHMARK RESULTS

3DMark Fire Strike: 13,450 points
3DMark Fire Strike (Extreme): 6,324 points



A great selection of ports for you to use



The logo lights up depending on the load



Gold Power

ASUS goes for gold with its 20th Anniversary GTX980 graphics card *By Nazrin Zain*

ASUS is now entering its 20th year in the graphics card business, and what better way to celebrate the occasion than to announce a brand new souped-up version of one of NVIDIA's most powerful graphics cards ever made, the GTX 980? Aptly named the ASUS GTX980 20th Anniversary Gold Edition, ASUS claims this to be the most powerful GTX980 yet.

Right smack out of the box, you can see that ASUS calls this the Gold Edition card for obvious reasons. Where typically you would see a majority of ASUS' cards decked in black and red, this time around, the company pimps it up by adding gold accents wherever possible, including the entirety of the card's back plate.

That's not all of course. ASUS claims that the Gold Edition card is the most powerful GTX980 yet, and backs this claim by factory overclocking the card's core clock to 1,317MHz, from its base clock of 1,126MHz. As far as connectivity goes, it is decked with the standard selection of DVI, HDMI and DisplayPort ports.

What sets the Gold Edition card apart even more than the rest of the other cards is its capability to be overclocked to a whopping 1,400MHz, which should allow you to push for gaming at higher

resolutions such as 1440p and even 4K.

Much like the rest of ASUS' new GPU offerings, the Gold Edition features ASUS' 0db noise fans, which means that the fans don't spin until the GPU hits a certain load level and temperature setting. This can be seen via the 20th Anniversary Logo at the top side of the card, which indicates the temperature levels of the card.

During our tests, the only times the fans do spin is during the higher-end 3DMark Fire Storm Extreme tests and intense gaming sessions, where we tried out titles like Crysis, Metal Gear Solid V Ground Zeroes and Final Fantasy XIV.

Even then, the Gold Edition card was pretty silent and relatively cool throughout these sessions, while pushing out high framerates with no issues whatsoever.

CHIP CONCLUDE :

The ASUS GTX 980 20th Anniversary Gold Edition definitely blows the rest of the competition out of the water. The price might be a deterrent to some, but the kind of performance you get from it easily justifies the pricetag, as you'll be using it for years to come. Definitely one to consider if you're looking to build a long-lasting high-end gaming PC.



For Work, Play and Everything in Between

The MSI PX60 is more than just a multimedia laptop

By Nazrin Zain

We've seen quite a number of MSI gaming notebooks in the past few months, so this time around, they've come up with a notebook that's catered more towards the multimedia-conscious crowd, such as designers, developers and casual gamer crowd with the brand new MSI PX60 2QD notebook.

Unlike the more gaudy-looking Gaming line, the PX60 is a bit more minimalist and understated in its looks. Sporting a silver finish and a black display bezel, the laptop features a sizeable 15.6 inch Full HD display. It is powered by an Intel Core i7-4720HQ processor alongside 16GBs of DDR3 RAM and a discrete NVIDIA GTX950M GPU, alongside 1TB of storage space.

The PX60 also is one of very few notebooks out there featuring a display that is certified to be able to display 100 percent sRGB colours and 94 percent NTSC, making it the perfect portable work machine for designers on the move.

For those who prefer to work with multiple displays, the PX60 also features a HDMI and DisplayPort which allows you to extend the display to three screens. Thanks to the powerful CPU and GPU inside the

notebook, you can also use it as a desktop replacement machine if you so desire.

Designers also typically work long hours at work, and MSI has also included a low blue-light mode which allows users to use the laptop for extended periods of time without worrying too much about long-term damage to the eyes.

Performance-wise, the PX60 is an excellent notebook that performs amazingly well not just in terms of computing and graphics power, but also sound and cooling. Throughout our tests, the PX60 hardly made any noise, and the heat, whilst still noticeable, only just warms up the laptop a bit, very likely thanks to MSI's Cooler Boost 3 cooling technology.

Being a multimedia notebook, the PX60 also comes with Dynaudio speakers, coupled with the Nahimic audio enhancer software which allows you to adjust the speaker's settings to your preference. 

CHIP CONCLUDE :

The MSI PX60 is decidedly much more minimalist compared to its Gaming-line counterpart, whilst maintaining the kind of performance and reliability that MSI notebooks are known for.

MSI PX60 2QD

Price	TBA
Info	MediaForte (Malaysia) Sdn. Bhd
Phone	(03) 7960 6868
Contact	game.msi.com

Specifications

Operating System:	Windows 8.1
Display:	15.6 inch FHD TFT Display
Processor:	Intel Core i7-4720HQ
Graphics:	NVIDIA GTX950M
Connectivity:	WiFi, Bluetooth
Memory:	16GB DDR3
Storage:	1TB HDD
Others:	HDMI x1, DisplayPort x1, USB 3.0 x2, SD Card reader

RATINGS

Performance	    
Features	   
Design	  
	 Slim Powerful specs Great screen  None



BENCHMARK RESULTS

3DMark Firestrike:	3,378 points
3DMark FireStrike Extreme:	1,229 points
PCMark 8 Work:	2,457 points
PCMark 8 Creative:	4,119 points
PCMark 8 Home:	3,713 points



You get a full-sized keyboard with the PX60



There is also another USB 3 port on the opposite side

ASUS EA-AC87

Price TBA
Contact Advancenet Technology Sdn Bhd, SDS Distribution Sdn Bhd
Phone (03) 8070 3633, (03) 7788 8700
Info www.asus.com/my

Specifications

Ports: 5 x Gigabit
Removable Antennas: Yes, 4
MIMO: Yes
Network Standard: 802.11ac
Bands: 5GHz
Dimensions: 160 x 160 x 40 ~ mm
Weight: 480g

RATINGS

Performance	
Features	
Design	
Value	

Multiple antennas
5GHz band
Gigabit LAN



Only works optimally
with another AC router



Five Gigabit LAN ports at your disposal



Easy to read WiFi indicator LEDs situated on the front of the unit



Beef Up Your Wireless

AC protocol makes the ASUS EA-AC87 a great future proof investment *By Sharil Abdul Rahman*

Being data hungry users that we are today, even at home we expect data to flow through the wireless network as smooth as a hot knife cutting through butter. The latest wireless protocol – 802.11ac promises that, and the ASUS EA-AC87 Media Bridge is a device that is poised to take advantage to the new protocol. Or does it?

The EA-AC87 is a media bridge and access point device in one, which can run in multiple modes for multiple usages. For instance, it is a bridge device that allows your current router to be connected to the EA-AC87 via wires or wireless, and enable your wireless system to be converted into an AC-capable connection.

Thanks to its 4x4 MIMO antennas, it can achieve duplex transfers at full speed, using the 5GHz band. Thanks to that, your devices using the more popular 2.4GHz band will not be affected. There is a caveat to this though – if you want to get the full wireless transfer speed of up to 1750Mbit/s, you need to pair the EA-AC87 with a suitable AC router. If not, you are limited to the top speed of the origin router instead.

The other usage of the EA-AC87 is

to turn your current wired devices into wireless capable devices. Thanks to the four gigabit LAN ports at the back, you can connect your PC, game console or anything else that has no wireless capability, and connect them to your wireless network. With high speed wireless networks, you can have your devices stream media in high definition, without wire strewn haphazardly around the house or office.

We tested the media bridge as both an access point and as a wireless media bridge, and we got great results out of it. Streaming a full HD movie to our media centre PC was smooth, with no choppiness that is usually associated wireless connection. We even transferred the same movie through the network, and managed to download the 4.5GB file in under 40 seconds. Very impressive. We did test it on an older N router, and it still manages to stream the video smoothly, but took about twice the time to transfer the file.

CHIP CONCLUDE :

A great addition for including 802.11ac protocol in your home/work wireless network.

Elysium Porto XI

Price RM 1,499
Contact Leapfrog Distribution Sdn Bhd
Phone (03) 7803 6703
Info www.elysiumlab.com



A Portable Boombox

The Elysium Porto XI is a new age portable speaker that reminisces the old trend of lugging around a boombox

By Nicolas See Tho

Do you remember the days of old when teenagers would bring out their big boom boxes to bring music wherever they go, well in the present we also have the same device but with all the new bells and whistles and this device is the Elysium Porto XI.

Straight out of the box, the speaker provides minimal setup as it is an easy plug and play system. It has an NFC lining on the top as well as the control settings while the sides would show a line-in audio port for external input. What can be seen on the front of the device are two speakers that flanks a single subwoofer in the middle. The device lacks a USB port however, which is an inconvenience to those who wants to play music straight from their USB.

The most prominent feature on this device is the large handle that is part of its design which makes it very easy to carry around. With its Bluetooth capabilities, it can also stream media easily from any smartphone or tablet while also

supporting wired usage with its input jacks. When the surrounding gets dark, its panel has illumination to provide a rise in aesthetics as well as visibility.

During our time with the speaker we tested this device with various forms of media. Music wise, the speaker gave average mids and amazing highs while movie-wise the clarity is commendable with voices and sound effects being audible and clear. The NFC and Bluetooth pairing took some time at first, but after the first pairing, subsequent pairings became fast and painless.

CHIP CONCLUDE :

All in all, the Elysium Porto XI is a handy and portable speaker to take around with you which can be used on any occasion whether it be parties or hangouts. With its punchy bass and serene clarity, it is bound to turn any environment into a vibrant atmosphere.

Specifications

Driver size: 2x6W
Subwoofer: Yes
Ports: Line In Audio
Connectivity: Bluetooth 4.0, NFC

RATINGS

Performance	
Features	
Design	
Value	
Portable Good sound quality	
No USB ports	



While it says 'compact' here - it is more of a small medium sized sound blaster...



Sadly you only get a single line-in port for your external devices

ASUS ROG G501J

Price	RM6,399 (bundled)
Contact	Build Technology Supply Sdn Bhd., ECS Astar Sdn Bhd
Phone	(03) 7955 3699, (03) 6286 8222
Info	www.asus.com/my/

Specifications

Operating System: Windows 8.1 Pro
Display: 15.6-inch QFHD
Processor: Intel Core i7-4720HQ
Graphics: NVIDIA GeForce GTX 960M
Connectivity: 3x USB 3.0, 1x DisplayPort, 1x Ethernet
Memory: 16GB
Storage: 1TB HDD 5400rpm + 128GB SATA3 SSD
Others: Bluetooth, WLAN
Dimensions: 20.66mm
Weight: 2.06kg

RATINGS

Performance	
Features	
Design	
Value	

Lightweight
High performance



Not many extension ports

BENCHMARK RESULTS

3DMark FireStrike:	4,353 points
3DMark FireStrike Extreme:	3,210 points
PCMark 8 Work:	2,965 points
PCMark 8 Creative:	4,061 points
PCMark 8 Home:	3,935 points



Part of the bundle that this device comes with is the ASUS ROG gaming headset and mouse with a gaming bag for keeping the laptop and peripherals



Thunder Gaming

Slim gaming is made more powerful with the new ASUS ROG G501J gaming laptop, which emphasises both portability and performance *By Nicolas See Tho*

Gamers can be a fickle bunch of individuals as when purchasing a gaming device, often times they would wait a month or so before completing their gaming experience with a headset or a mouse to meet their gaming requirements. This time around, ASUS has released the G501J gaming laptop complete with a gaming bundle that helps gamers feel complete instead of wanting.

This gaming laptop bears the trademark colours of the ROG branding which are a thematic black and red. On its sides are three USB 3.0 ports, a mini DisplayPort and a HDMI port. This configuration leaves little room for many peripherals as an average game could have more than three devices plugged in to the USB itself. On a good note, the keyboard and leaves plenty of space for your hands to rest on.

This gaming device offers gamers a ton of different features that help enhance their gaming experience such as a 4K quality display which gives your games extra clarity and depth, while supplying a good audio performance with the aid of the ROG AudioWizard which allows custom sound

profiles as well as realistic sound effects. It also comes with a subtly lit backlit keyboard which highlights the WASD keys for gaming in the dark.

Gaming on the G501J was not disappointing as the benchmark tests shows a considerable amount of performance from the device. We tested the laptop with games such as Metal Gear Solid: Ground Zero and Skyrim on max settings and we managed to get 30-60 frames per second which is translated to smooth rendering and lag free gameplay. Another thing to note is that the laptop stays cool even under heavy load which is an added benefit for those who often play with a laptop on their lap.

CHIP CONCLUDE :

All in all, the ASUS ROG G501J gaming laptop comes at an affordable price as it comes with a full kit to get started with as well as a device that can handle all of today's games. Gamers who are always on the go should take a look at this device should they need an upgrade.



Wireless Laser

Fuji Xerox brings both wired and wireless networking printing in one device *By Sharil Abdul Rahman*

A printer is a printer is a printer - right? It all depends on what the function of the printer is available to the user, and how effective is the printer in your daily work flow. Fuji Xerox has been a stalwart in the enterprise scene, and their latest Docuprint M265 z is no different than the others that has come before it.

Perfect for SOHOs, small and medium enterprises - the M265 is a compact multifunction printer that prints in mono exclusively. It supports paper up to A4 size, and has a built-in paper tray that can hold up to 250 sheets of paper at any one time - perfect for the time you need to print out large number of sheets at one go.

Thanks to its multifunction nature - it is print, scan, copy, and fax capable. Yes, this printer has fax function built into the device, so all you need is to plug in your telephone cable, and it can perform fax functions. Sadly it doesn't come with any telephone attachments - but you can pass-through a telephone through the pass-through port at the back.

For printing, the M265 can print up to 30 pages per minute, with a maximum print resolution of 2400 x 600 dots per inch. It is only a mono printer, but a high resolution. It also can scan up to 600 x 1200 dpi for mono, and 600 x 2400 for colour. Using the supplied software, the images can straight away be saved to a local computer connected via the USB 2.0 port or through the LAN port. It also comes with a nifty ID scan function, which makes scanning and copying IDs a simple task.

Controlling the printer can be done either via software, through the 2.7 inch touch panel on the front, or through your smart device. Yes, this printer is also wireless capable, so you can connect your smart device and print straight through it - without any need to boot up the computer. A very nifty feature to have these days.

CHIP CONCLUDE :

A fine printer for SOHO usage, and also small businesses that needs to print out mono printouts fast.

Fuji Xerox M265 z

Price RM1,589
Contact Fuji Xerox Asia Pacific Pte Ltd
Phone (03) 2191 1888
Info www.fujixerox.com.my

Specifications

Type: Laser
Max Paper Size: A4
Max paper count: 250 in Input tray
Scanner: Yes, up to 600 x 1200 dpi (mono), 600 x 2400 dpi (colour)
Connectivity: Wireless, 10/100 LAN, USB 2.0
Card Reader: No
Fax: Yes, Full duplex
Dimensions: 409x 398.5 x 316.5mm
Weight: 11.5KG

RATINGS

Performance



Features



Design



Value



Multiple connectivity option
 Big paper tray
 Compact design

No built-in telephone



Both USB and LAN support



Simple to use touch screen

ASUS ZenFone 2

Price RM1,199
Contact Dynamics Distribution Sdn bhd.,
 ECS Astar Sdn Bhd
Phone (03) 8024 2100, (03) 6286 8222
Info www.asus.com/my

Specifications

Display: 5.5 inch Full HD Display
Processor: Intel Atom Z3850 @ 2.3GHz
Connectivity: WiFi, Bluetooth, 3G, LTE
Memory: 4GB
Storage: 32GB, expandable via MicroSD
Operating System: Android 5.0 Lollipop
Camera: 13.0MP PixelMaster Camera
Dimensions: 152.5 x 77.2 x 10.9 mm
Weight: 170g

RATINGS

Performance	
Features	
Design	
Value	

Performance
 Features
 Camera
 Battery

BENCHMARK RESULTS

3DMark Icestorm:	Maxed out!
3DMark Icestorm Unlimited:	Maxed out!
3DMark Icestorm Extreme:	19,889 points
PCMark:	5,770 points
AnTuTu:	47,250 points



The volume button is on the back, underneath the camera sensor



You do get dual SIM slots - but one of them is 2G only



Zenfone the Second

ASUS Zenfone 2 is feature-packed, and easy on the wallets *By Nazrin Zain*

There was much noise made over the past couple of months over ASUS' latest smartphone device, the ASUS Zenfone 2. It is the Taiwanese tech company's latest foray into the smartphone business, and boasts a variety of features that are great to have.

This time around, ASUS has standardised the Zenfone line to the Zenfone 2, but the device itself still comes in five different variants, with one coming in 5.0 inches, with the rest in 5.5 inches, running Android 5.0 Lollipop with the new ZenUI interface on top of it. This particular model that we received for review is powered by an Intel Atom Z3580 processor with 4GBs of RAM and 32GBs of storage, which is expandable via microSD.

The camera is one of the most talked-about points of the Zenfone 2, as the rear of the phone is decked with a 13MP PixelMaster camera that has a f2.0 aperture that take high-resolution photos with nearly no shutter lag whatsoever.

What makes the camera so impressive is that the camera has an amazing low-light mode that can light up the darkest of moments, and a HDR mode that reduces the glare from harsh backlighting to make your photos look a lot more dynamic.

Underneath the camera is the volume rocker, which is far more easily accessible compared to the ones that are usually located at the side. It can also be used as a camera shutter button, which also

allows you to take selfies far more easily, especially if you're using the front-facing 5MP camera.

The ZenMotion feature is an excellent feature which makes good use of the phone screen, where you can swipe on the screen whilst in standby mode to automatically activate apps instantly. For instance, double-tapping the screen will turn on the display, while drawing a "C" will activate the camera app. ASUS also allows you to reassign these gestures, so you can customise them to suit your needs.

Performance-wise, we had no issues with the phone, as it ran as smooth as butter throughout our time with it, with hardly any issues whatsoever. As far as battery life is concerned, the Zenfone 2 clocks in at about over six hours with above average use, which admittedly could be better, but on the plus side, the phone is also equipped with a fast-charging feature that charges the phone from empty up to 60 percent in half an hour. ☺

CHIP CONCLUDE :

If you're looking for a powerful phone that doesn't break your bank account, the ASUS Zenfone 2 is definitely one of the phones to get right now. It is powerful, has an amazing camera, and a lot of nifty apps and features that will make your phone fun and easy to use.



Sometimes, Simple is Best

ASUS VX228H monitor focuses on function over form

By Nazrin Zain

ASUS has been in the monitor game for quite some time now, but they've been relatively quiet on that front, with the company busy launching a bevy of notebooks and smartphones in the local market recently. So colour us surprised when they sent us the ASUS VX228H LED monitor, a display that looks and functions great both as a home and a work PC monitor.

The first thing that we noticed about the VX228H when we picked it up was how light it is. Weighing in at just 2.4kg, the monitor is a lightweight, with the LED display sizing in at 22 inches, featuring a display resolution of 1,920x1,080 pixels, with a response time of 1ms and a contrast ratio of 80M:1.

At the back, the VX228H houses two HDMI ports and one VGA port, alongside 5mm audio in and audio out ports which is nifty to connect your speakers to multiple input sources. In case you don't have any speakers or headphones, you can also opt to use the monitor's built-in speakers.

The VX228H's simple design means that there is more of the display for you to look at, rather than thick bezels and other unneeded aesthetics. Its ultra slim design also takes up less space than many other monitors, what with the display's minimalist hollow circular stand.

As far as display performance goes, the VX228H comes with ASUS' Splendid Video Intelligence technology which optimises the video performance and image fidelity by enhancing colour, brightness, contrast and sharpness of the output. It also comes with six preset video modes, including Scenery, Theater, Game, Night View, sRGB and Standard, all of which can be accessed via a button at the bottom panel of the monitor.

Personally, we like how great all the pre-calibrated colour profiles look, as minimum tweaking is needed to get it to display videos and games the way we like it. Coupled with ASUS' own EyeCare flicker-free technology, this means we can binge-watch movies or play games for hours on end without worrying about issues like eye-strain, although it's always a good idea to give your eyes a rest after an extended period of gaming.

CHIP CONCLUDE :

The ASUS VX228H is an excellent monitor that performs great, with a design that doesn't make it out of place regardless if you're at home or the office. Its connectivity options also allow you to connect a variety of devices to the display with little to no hassle.

ASUS VX228H

Price RM649
Contact Build Technology Supply Sdn Bhd., Servex (Malaysia) Sdn. Bhd
Phone (03) 7955 3699, (03) 8024 6688
Info www.asus.com/my/

Specifications

Display Size: 22 inch
Resolution: Full HD 1,920x1,080
Connectivity: HDMI x2, VGA x1
Refresh Rate: 1ms (GTG)
Touch: No
Viewing Angle: 170°(H)/160°(V)
Dimensions: 514.9x385.9x210 mm
Weight: 2.4kg

RATINGS

Performance



Features



Design



Value



Lightweight
Complete connectivity option
Good colour reproduction

No VESA mount
No height adjustment



It has a nice side profile



The unique stand makes it, well, stand out.

Huawei P8

Price TBA
Contact Huawei Malaysia Mobile Hotline
Phone 1 800 22 0086
Info www.huawei.com/my

Specifications

Display: 5.2-inch IPS LCD capacitive touchscreen 1080x1920
Processor: Quad-core 2GHz Cortex -A53 and Quad-core 1.5GHz Cortex-A53
Connectivity: microUSB v2.0 , Wi-Fi 802.11ac , NFC, Bluetooth
Memory: 3GB
Storage: 16GB expandable up to 128 GB via microSD
Operating System: Android 5.0
Camera: 13 MP rear, 8MP front
Dimensions: 144.9 x 72.1 x 6.4 mm
Weight: 144g

RATINGS

Performance	
Features	
Design	
+	Beautiful and sturdy body Unique camera features Large display
-	None

BENCHMARK RESULTS

3DMark Icestorm:	Maxed out!
3DMark Icestorm Unlimited:	6,119 points
3DMark Icestorm Extreme:	11,896 points
PCMark:	5,375 points
AnTuTu:	46,820 points



Sleek and Powerful

The new Huawei P8 comes with some surprising design features as well as a performance to match it

By Nicolas See Tho

Building upon its success with the P6, Huawei is back with a device that is slimmer sleeker and faster in the form of the Huawei P8 which exudes the feel and performance of a premium device.

Straight out of the box is a sleek and metal mobile body which feels like a premium device. It has a large 5.2-inch IPS LCD screen that looks amazing. It comes with the usual mix of microUSB and audio ports as well as the volume controls and power button located on the side. The Dual SIM slots supports both Nano-SIM cards with the second port able to hold a microSD card as an additional option.

This smartphone comes with a variety of features that entices such as the Light Painting feature which allows users to trace light tracks in the air to create truly unique and vibrant night shots with aid from a real time preview to provide the perfect exposure. Another cool photography feature is the beauty shot which gives you the perfect selfie by highlighting all your good features and leaving out the bad. Completing its full suite of photography features would be its Dual-Tone Colour Flash which

provides better picture clarity in low light situations.

Performance-wise, this smartphone let's lose its full potential during our benchmarks tests which incorporate 3DMark Icestorm and PCMark. It scored high marks on both accounts as well as the tests done on AnTuTu. This device can play all the graphically demanding games on the Google Play market with minimal lag or frame distortions. It's heavily advertised camera also lives up to its hype as we managed to get beautiful pictures from different exposure settings. As for battery life, this device is able to handle its fair share of applications throughout the day without running low.

CHIP CONCLUDE :

The Huawei P8 is a beautiful and powerful device that turns heads with its metallic design and beautiful display. Those who are looking to replace their older smartphones should give this device a try if they are looking for a smartphone with powerful photography features and sleek design.



The main feature of the Huawei P8 lies in its powerful 13MP camera which is supported by a variety of photography apps within the device



Maxify Your Printing Needs

Latest printer from Canon gives SOHO and small offices some printing boost

By Sharil Abdul Rahman

As weird as it may seem, we are still living in a world where paper is needed – even though the digital revolution has well and truly been implemented in force. Paperwork is still part and parcel of our daily lives – so why not embrace it properly? This is especially important for SOHO or small office setups. The new Canon MAXIFY MB5070 may just fit the bill for everyone.

This is definitely not one of Canon's smallest offerings – but at the same time it is the most compact business all-in-one printer you can get right now. When we mean compact, we meant that the printer does not have awkward bits jutting out from the sides like quills on a porcupine.

With a maximum paper size of A4, the MB5070 can fit up to 250 pieces of paper in the cassette that also collapses for storage. It also accepts photo paper and envelopes, if you are so inclined to print out photos and addresses on your letters.

As it is an all-in-one, the MB5070 also copy and scans, with resolution up to 1200 x 1200 dpi. It does take a while to copy in colour – it took us at least three to four minutes for our colour scan to complete –

but once it is done, the printing only took about five seconds.

It also supports USB for both reading and writing – thus you can print from the USB stick or you can save your scanned documents straight to it – without the need of a PC. For networking, the MB5070 comes with both wired and wireless LAN – the former is a 10/100 connectivity, while the latter is an 802.11b/g/n radio. It also comes with a fax built in – so this is truly an all-in-one for the office.

Controlling the printer can be done via a few ways – using the traditional USB connection to the PC, via the touch-panel on the front of the printer, or through a free app that you can download from the Apple App store or Google Play Store. There is also the MAXIFY Cloud Link, where users can print from popular online services for office use, like Dropbox, Google Drive and OneDrive straight to the printer. Convenient. 

CHIP CONCLUDE :

If you are looking for a printer that can serve your office well, check out the Canon MAXIFY MB5070.

Canon MAXIFY MB5070

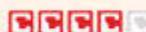
Price RM 908
Contact Canon Marketing Malaysia Sdn Bhd
Phone (03) 7884 6000
Info www.canon.com.my

Specifications

Type: Inkjet
Max Paper Size: A4
Max paper count: 250 in cassette
Scanner: Yes, 1200 DPI
Connectivity: 10/100 LAN, WiFi, USB 2.0
Card Reader: No
Dimensions: 463 x 394 x 291 mm
Weight: 11.4KG

RATINGS

Performance



Features



Design



Value



 Multifunctional
 Wireless connectivity
 Compact design

 No card reader



Easy to use LCD touch screen included in the package



Multiple ways to connect to your office environment

ILLEGEAR D5

Price From RM 6,499
Contact ILLEGEAR Sdn. Bhd.
Phone (03) 7610 0987
Info www.illegear.com

Specifications

Operating System: Windows 8.1
Display: 15.6" Full HD Anti-glare IPS/AHVA
Processor: Intel Core i7-4790K @ 4.0 GHz
Graphics: NVIDIA GTX 980M 8GB
Connectivity: 4 x USB 3.0, 2 x Display Port, 1 x HDMI
Memory: 32GB
Storage: 128GB SSD + 1TB Hard Disk
Others: Killer Wireless AC 802.11ac
Dimensions: 386 x 262 x 7-35.7 mm
Weight: 3.4KG

RATINGS

Performance	5
Features	5
Design	4
Value	3

 Great graphics performance
 Manageable bulk
 Customisable
 Heavy

BENCHMARK RESULTS

3DMark:	
Fire Strike:	8,777 points
Fire Strike Extreme:	4,456 points
PCMark 8:	
Home:	4,268 points
Creative:	4,182 points
Work:	4,910 points



One of the more complete portable jamisy machine out there



Gaming on Another Level

ILLEGEAR proves they know their stuff for gaming laptops *By Sharil Abdul Rahman*

Everyone knows that hard core gaming needs hard core level specs for their PC – regardless it is for the desktop or on the go. Many companies have tried to tap into this market – Alienware, Razer, Lenovo and so on. Another player wants to dip their fingers into this small yet lucrative pie – and they are based here in Malaysia. ILLEGEAR has brought forth their latest entry to the gaming laptop game – the ILLEGEAR D5.

This is what a gaming laptop should be – speced to the gills and full of yummy tech. The D5 that was passed to us comes with Intel's Z97 – a desktop-level chipset, and also Intel's Core i7-4790K processor. Yes, you are getting desktop performance in something you can lug around the campus or office.

ILLEGEAR also fitted the NVIDIA GeForce GTX 980M GPU with 8GBs of GDDR3 underneath the hood of this beast. It is paired to a 15.6 inch Full HD (1920 x 1080 pixels) IPS screen for gaming graphics goodness. What else? How about 32GBs of RAM, both a M.2 SATA SSD and hard drive for storage (128GB for the former, 1TB for the latter).

If that is not enough, Killer's Wireless AC network card is also included in the package.

Aesthetically the D5 is a handsome laptop, and Illegear has made steps to make it prettier, with a full colour-spectrum back-lit keyboard and even a LED light just below the touchpad.

Gaming with this beast is an experience. We ran Metal Gear Solid V on this laptop, and we consistently got framerates upwards of 45 fps, which is awesome coming from a GTX 980M GPU. Mind you this is all in High, so even on Extra High we expect not much performance degradation.

If you are an audiophile, you may want to check out the D5, as ILLEGEAR has teamed up with Onkyo for the speakers on this machine – making it a great audio companion as well. My only comment about the D5 is the battery life – but you don't buy this for ultra-long portable power anyway. 

CHIP CONCLUDE :

A great gaming laptop, if you are willing to part with the dough.



Here Comes USB 3.1

ASUS launches refreshed motherboards with USB3.1 support

By Nazrin Zain

Just when you thought we're almost done with Z97 motherboards, what with Broadwell just around the corner, ASUS unveils yet another brand new revision of its Z97-A motherboard, called the ASUS Z97-A USB3.1 motherboard.

Out of the box, the Z97-A USB3.1 motherboard features the standard four DDR3 DIMMs, supporting up to 3,200MHz RAM sticks, four SATA III 6.0Gbps ports, one SATA Express port and one M.2 SATA III port, if you're looking to build a PC that uses M.2 SATA SSDs. It also has three PCIe 3.0 slots that support both NVIDIA's SLI and AMD's CrossFireX multiple GPU configuration if you so desire.

At the back, the Z97-A USB 3.1 comes with a smattering of I/O options, including video output options, such as HDMI, DVI, VGA and DisplayPort, as well as a LAN port, audio ports, four USB 3.0 ports and two USB 3.1 Type-A ports.

Performance is just about what one could expect out of the Z97-A. It overclocks well enough, and has a variety of options and features that allows users to tweak your hardware overall in order to get the most out of your computer. Overclocking our processor to 3.5GHz was pretty straight forward with this motherboard, and with

better cooling solution, we're certain that it can go even higher.

Of course, the star of the show for this motherboard has got to be the USB 3.1 support. Unlike USB 2.0 and 3.0, the new USB 3.1 standard taps into the PCIe bus lanes, allowing users to gain transfer speeds of up to 10Gbps, which is twice faster than that of its predecessor. Not only that, it is also backwards compatible with the other two USB connectivity formats, which is great if you find yourself running out of standard USB ports on the board.

The downside of course is that there are currently not many USB 3.1-supported devices out there right now, and the ones that are in the market right now are currently quite expensive to buy, what with the format only being announced very recently.

CHIP CONCLUDE :

The ASUS Z97 USB 3.1 motherboard is a good, standard motherboard to have, assuming you haven't made the jump to the Z97 platform yet, and are thinking of doing so. It's always good to have the latest connectivity options early on, so that you can simply grab one that supports it off the shelves once they go mainstream.

ASUS Z97-A USB3.1

Price TBA
Contact Build Technology Supply Sdn Bhd., Servex (Malaysia) Sdn. Bhd
Phone (03) 7955 3699, (03) 8024 6688
Info www.asus.com/my/

Specifications

Slot: Z97
CPU: 4th/5th Generation Intel Core Processor
RAM Slots: 4
RAM Type: DDR3 DIMM
Ports: DVI x1, VGA x1, HDMI x1, DisplayPort x1, USB 3.0 x4, USB 3.1 x2, RJ-45 LAN x1, audio jacks x5
Others: Dual Intelligent Processors 5, ASUS 5X Protection, ASUS TPU, ASUS EPU, ASUS Digital Power Design
Size: ATX
Dimensions: 305 cm x 244 mm

RATINGS

Performance	
Features	
Design	
Value	
Performance USB 3.1 support	
Lack of USB 3.1 accessories	



BENCHMARK RESULTS

PCMark 8 (Home): 4,323 points
PCMark 8 (Creative): 4,299 points
PCMark 8 (Work): 4,430 points



Unique chip cooler on board



The USB 3.1 ports stands out among the rest

GEEKMOMMY

Cool Father's Day Gift Ideas for Geek Daddies

Here are some cool gift ideas besides a tie, belt or watch to reward daddies for doing their part By GeekMommy



Movie Critics Dads

If your man has a "man cave", a wide screen Smart LED TV or 3D LED TV would satisfy his need for big screen entertainment. Throw in a good surround sound system, mini bar fridge and he would be one happy man who doesn't need an excuse for a boys night out as he could invite them over. But do make sure to sound proof the room as well with padded walls or just use thick curtains to save cost.

To complement the wide screen TV, why not get the Chromecast, a thumb-sized media streaming device that plugs into the HDMI port on your TV. Just use an Android phone, tablet, iPhone, iPad, Mac or Windows laptop, or



Chromebook to cast your favourite entertainment and apps right to the big screen. Chromecast works with a growing number of apps, including Netflix, HBO GO, YouTube, WatchESPN and Pandora.

James Bond Dads

Wearable technology is picking up and with the many options available from technology giants, you will be spoilt for choice. A third of them are made by start-ups like Pebble, a third from rebounding firms like Motorola, a third are from Samsung and one is made by Apple.

All smartwatches deliver important information right to your wrists from texts messages to email alerts. Notifications and apps are the big difference when choosing between smartwatches and the best fitness trackers. Most importantly, think of safe hands-free driving for daddies on the go.



Hulk Dads

For dads who are into marathons, triathlons, Boot Camps, Spartan Race and even Viper Challenge, a fitness tracker would be their best training companion. There are many to choose from such as Fitbit, Jawbone, Orbit and Garmin. The right fitness activity tracker should be based on individual needs; such as step counting, sleep tracking, 24 hours heart rate tracking, calorific burnt count or GPS to track running, cycling and swimming with live pace and distances.

Geeky Dads

I stumbled upon this awesome website called Nerd Block that has licensed merchandise such as exclusive T-shirts, nerd gears and collectables from Nintendo, Star Wars, Marvel, DC Comic, Jinx. They run by the motto of, "Geek tested, nerd approved". Another cool gift idea for gamer and comic fan daddies of all genres.



MacGyver Dads

For dads who loves camping, hiking or going bush walking at the wild outdoors, a survival kit is a must-have. Perhaps it's time to upgrade that Swiss army knife with a nifty survival kits such as the Bear Grylls Ultimate Kit that has everything you need to survive in even the toughest spots. If you prefer something more compact, go for the Survival Kit-In-A-Can.



Geek Mommy tries to makes sense of the tech world for the less techie while managing a household, a job and keeping a toddler busy. More of her musings at <http://geekmommy.info/>

WATCH

Top 4 Upcoming Movies To Watch

Age Of Ultron was spectacular, Mad Max: Fury Road was violently surprising, but are there anything worth watching in the coming second half of the year? This month, we are going to gear you up with info on the movies you should watch on the second half of the year for when you are hunting for cinema worthy adventures

By Nicolas See Tho

Ant-Man

Director: Peyton Reed

Producer: Kevin Feige

Age Of Ultron ended with many questions being answered as well as new ones arising, but as the Marvel Cinematic Universe goes, one cannot understand the bigger picture without watching the next movie. Ant-Man places itself as a part of the Marvel Cinematic Universe, with the difference from the comics lie in skipping the first generation and heading straight to the second generation Ant-

Man. Ant-Man has the ability to shrink in size but inversely grow in strength, which makes this a very interesting hero to watch - as well as the odd casting of Paul Rudd as Ant-Man. Regardless, expect to see glimpses and Easter eggs on the coming Captain America movie within this movie as they are bound to leave their mark somewhere.



Star Wars: The Force Awakens

Director: J.J Abrams

Producer: Kathleen Kennedy, Bryan Burk

We believe that we are not the only ones excited at a new Star Wars film that is coming this Christmas season. This movie takes place 33 years after The Return Of The Jedi, with most of the old cast reprising their roles while adding a slew of new characters. The teaser trailers have whet our cravings with sinister scenes of new lightsabers, new robots, plus the return of the Millenium Falcon and X-wings. We can expect a lot of new twists and turns, as the Star Wars universe from here on out is going to be an entirely new storyline from which the expanded universe does not touch upon.



Jurassic World

Director: Colin Trevorrow

Producer: Frank Marshall, Patrick Crowley

The legendary film franchise is back, and this time it takes place 22 years after the events of Jurassic Park. The park itself has evolved into a dinosaur-based theme park called Jurassic World. Early trailers also show that this could be the closest movie in human history to a live Pokemon film. The plot however revolves around an experimental dinosaur

that escapes and begins to threaten the lives of the inhabitants and visitors within the theme park. You can expect the same exciting thrills such as dinosaur chases, scary hiding from dinosaur moments and of course, lots of people screaming. Plus, Chris Pratt with his velociraptors.

Spectre

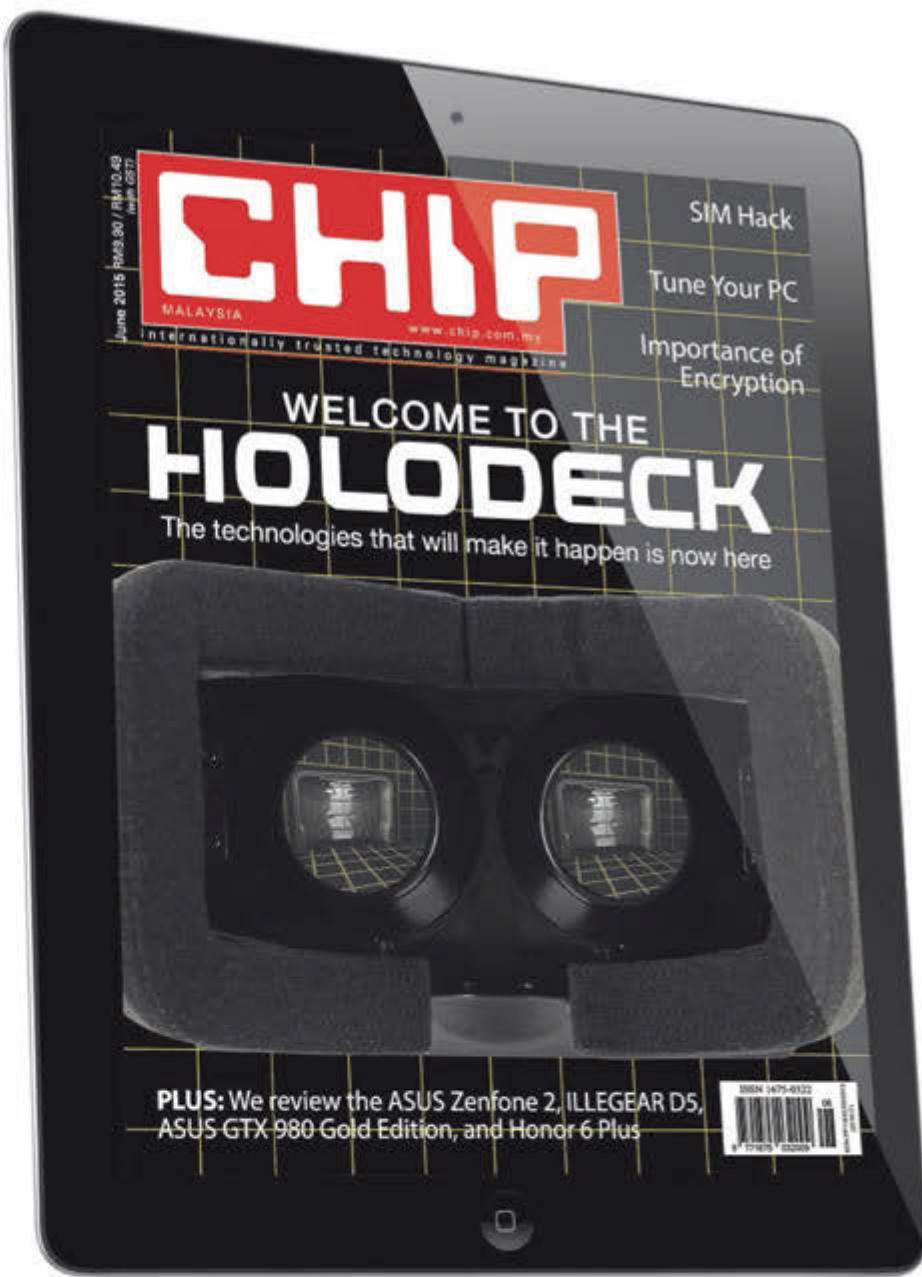
Director: Sam Mendes

Producer: Micheal G. Wilson

Many were surprised when the trailers started circulating on YouTube as other big blockbusters are also vying for the same cyberspace..err, space. When it comes to action and style, James Bond never disappoints - which is mixed with a dab of class. We can expect to see expensive cars, fine looking women, and a lot of gunfights as this time, Mr Bond receives a

cryptic message from his past which becomes a serious threat to his future and his ideals. C

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FAVOURITE I.T.
&
TECHNOLOGY
MAGAZINE IS
ALREADY
AVAILABLE
DIGITALLY!**



Here's how to order CHIP Malaysia to go :-

Step 1: Download Zinio

CHIP Malaysia will be available on Zinio, one of the most popular digital newsstands on the internet. They have an iOS app as well, which is where CHIP Malaysia is sold.

Tap on the App Store icon on your iPad and search for 'Zinio'. The first entry should be Zinio Magazine Newsstand & Reader. Click on it and wait for it to be downloaded and installed.

Step 2: Creating a Zinio account

You will need to have an account with Zinio to download magazines from its store. Zinio will keep a record of what you've purchased and if you restore your iPad, all you need to do is to re-download your content. The best part of all? Re-downloads are free!

You can create a Zinio account from the app itself or log on to www.zinio.com to do it. All you need is an email address and a password.

Step 3: Download CHIP Malaysia

Launch Zinio and you'll see three tabs at the bottom. Click on the 'Shop' tab and search for 'CHIP Malaysia'. When you see our cover, that means you're close to getting your hands on CHIP Malaysia's iPad magazine.

You have the option to get the newest issue or subscribe to 12 issues. Select an option and pay for it via PayPal or Credit Card.

Step 4: Read

Once that is done, tap 'Library' at the bottom bar and you'll see the cover of the issue you bought. Tap on it and you're done! Zinio will let you read while it downloads the remaining pages. Enjoy!

THEY KNOW WHAT SCARES YOU.



POLTERGEIST

IN CINEMAS 18 JUNE IN 3D

POLTERGEIST CONTEST

Terms & Conditions:

1. Contest open to all Malaysians except the employees of Online Dynamics (M) Sdn Bhd & Twentieth Century Fox Film (Malaysia) Sdn Bhd.
2. Only original entry form is accepted.
3. The judges decision is final and no correspondence will be entertained.

4. Prizes are not transferable or redeemable for cash.
5. Closing Date: **30th June 2015**
6. Send your entries to:
Online Dynamics (M) Sdn Bhd/
POLTERGEIST Contest
A-5-07, Block A, Neo Damansara,
Bandar Damansara Perdana, Jalan PJU 8/1
47820 Petaling Jaya, Selangor Darul Ehsan.

POLTERGEIST CONTEST

1st Prize
Messenger Bag
Notebook
T-Shirt
Double Passes x 4

2nd Prize x 2
Notebook
T-Shirt
Double Passes x 2



**POLTERGEIST
CHIP CONTEST**

Questions:

1) Tell us why do you look forward to
watch **POI TERGEIST** at the cinema.

Name:-

W/C No:

Address :

第45回

— 11 —

TOUCH

Keeping Yourself Secure

As Malaysians, it's always important that we keep ourselves safe from unsavoury people who are always looking to do harm upon others. In this month's issue of Touch, we'll take a look at a number of security apps that you can download and use to keep yourself and others safe and secure from possible threats

By Nazrin Zain

Watch Over Me

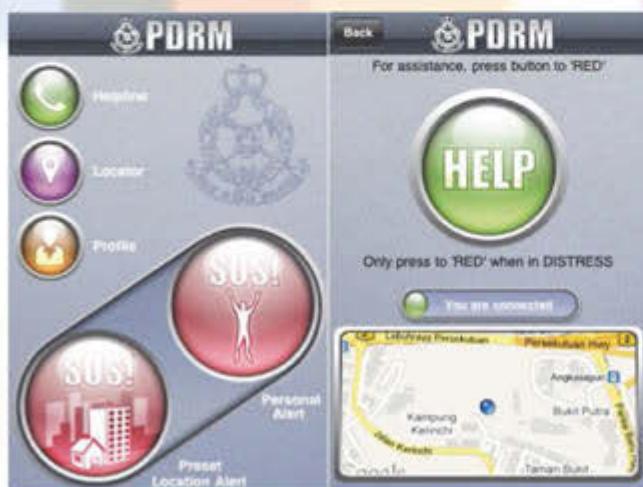
Platform: Android, iOS

Developer: Watch Over Me

You may recall some time ago, there was a lady who was almost abducted by a group of criminals in The Curve's car park area. After her ordeal, that same lady has also helped develop a safety app that aims to be easy to use, yet feature packed for everyone's safety out there.

As its name implies, the main feature of the Watch Over Me app is the tracking feature. What this does is it allows you to alert friends and families about your whereabouts for a certain amount of time, so that they can ensure that you get to your intended destination safely.

The app will track you via GPS until you check in safely, and if you don't make it to your destination in time, it will alert your emergency contact list immediately via SMS, Facebook or email. In case you do run into trouble, there is also the Shake Your Phone feature, which will trigger an emergency alert immediately and turns on your camera to record a video of what's going on.



MyDistress

Platform: Android

Developer: Convep Mobilogy

MyDistress is an app created by the Polis DiRaja Malaysia, which is yet another easy to use distress app that allows users easy access to the PDRM's direct hotline, and a variety of other features that can help you out if you ever find yourself in an emergency situation and you can't make your movement be seen.

The app comes with several features, including Personal Alert, which is for outdoor use, and tracks your movement during your travels. Preset Location Alert meanwhile is for indoor use, and is typically set up so that you are at your intended location. Built in within these two features is the ON HELP button, which is a request for help button which is sent directly to the police force, who will then send personnel to your location to assist you.

Built-in within the app is also the Helpline and Locator features. The Helpline button, as its name implies is a button that instantly gets you on to the PDRM hotline, cutting through the time it requires you to remember and key in the number. The Locator app meanwhile turns on your GPS and Location settings in order to allow you to keep track of your location, so you and the police can know of your whereabouts.

MyHero

Platform: Android

Developer: Dino Media

MyHero calls itself a digital loudhailer for the community, leveraging on the concept of crowdsourcing to find others who may be nearby who could help them if ever they find themselves in trouble.

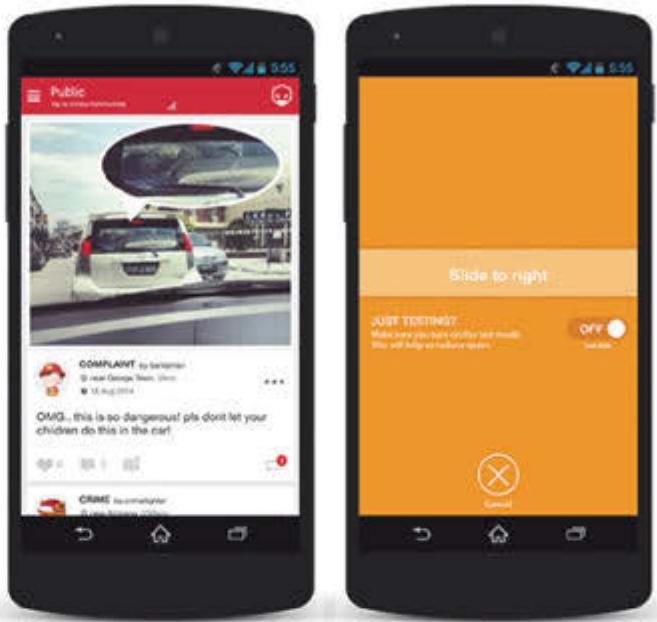
The app connects the user within a 10km radius, using a geolocation service to call for help from anyone nearby who also has the app installed. It also aims to be the platform to help people reconnect with one another, be it because of lifestyle, health, safety, and many other social reasons.

Besides being a mobile SOS beacon, MyHero also has several other features, such as a geolocation news feed, which allows users to view the latest events that are happening in the area, be it a new food joint, or a notice for someone's missing pet. Users can also comment on these posts and even "Like" it by tapping on the Heart icon below the post to show your approval.

You can also post on the MyHero app by using the Report feature to show everyone within that 10km radius about what you just discovered, or are currently seeing. You can also share photos that you take, and even share the post on Facebook

If you have friends on the MyHero app, you can also use the Monitor feature, which allows you to keep track of their location, and the stuff they've posted on the app. On top of that, sharing from other users in the area is also highlighted on the map to help users know what is happening around the area.

The app's main feature, of course, is the Help Me! Function. Using it is as simple as sliding your finger the SOS slider, and it will alert users within the area on the news feed. Instead of waiting for family and friends who may be far away, you can leverage the community's help if ever you find yourself in trouble with unsavoury people.



this feature, you can also blacklist loan shark numbers, report on vehicle owners who are participating in illegal dumping of waste material and such.

You can also submit any ideas you may have to the Resident Thinkbox, and forward it to the local councillor if it receives enough backing from other residents. It's definitely an excellent way for the people to help develop the city alongside the local government. 

MyCleanCity

Platform: Android, iOS

Developer: Cynthia Gabriel

MyCleanCity is an app created by the Centre to Combat Corruption and Cronyism (C4) for citizens to keep their towns clean, safe and liveable. Currently, the app works in conjunction with the Petaling Jaya City Council, helping locals to participate in governance via a variety of methods.

With the MyCleanCity app, users can submit complaints about local issues almost immediately, relating to garbage, potholes and any other issues that affect the local community. The complaints will be then channeled to local authorities for action. Residents will be able to track their status of their complaint based on service level agreement times of MBPJ, and take the complaints to the meet the councillor session once a month.

The Catch The Culprit feature meanwhile allows users to report on criminal activities, or individuals who are causing problems in the neighbourhood, or other parts of the city. With

PLAY

GAME REVIEW

Survival Of The Fittest

By Nicolas See Tho



Character customisation is made easy as you only need to wear what keeps you alive, and keep what you need to survive



During your travels across the winter Siberia, you can be sure to meet fellow individuals who may not always be a friendly bunch

The forests of Siberia is a harsh landscape, and when you start off in this cruel world in nothing but a set of pants, you tend to get cranky and desperate. Welcome to the world of *Survival: Postapocalypse Now*, another addition to the already oversaturated survival simulator games that are already out on the market. What sets this game apart from the rest however is in the small details.

In this survival scenario, players are required to survive multiple forms of

death which can come in many ways, where death by players are predominant. The first order of business as one is born into the game is to find clothing to keep your character warm - if not, its death by hyperthermia. Should you survive the days of winter with your new found threads, you must

then procure food and water to stave off dehydration and starvation, as both of those can kill you at any time.

As the game progresses, you would then need to find a form of self-defence which can range from a mere baseball bat to a high powered rifle. Combine all of these steps with the gritty feeling that someone is always hunting you out in the open makes for a pure adrenaline rush when playing the game. During combat, you would notice that a lot of the gun effects are actually

pretty realistic as well as their reload mechanisms. That being said, the game still has some bugs considering its early access status, such as getting stuck in a pixel glitch or the random frame drops that teleports players back to their starting point.

On the plus side, this game has some of the more appealing visuals and audio aesthetics when compared to other survival counterparts, as the lighting is amazing while the weather and ambient music plays well into the apocalyptic theme. Another noteworthy feature of the game is its large playable map size which measures up to 40 square kilometres, thus giving players a lot of locations to travel across.

So for those of you who are still enjoying the thematic survival games that has popped up in multitudes, give this game a try as it is definitely worth every penny. 

SURVIVAL, EARLY ACCESS, FPS

Survival: Postapocalypse Now

DEVELOPER TB Games Workshop

PRICE RM12.00

INFO www.steamcommunity.com

SYSTEM REQUIREMENTS

PLATFORM: PC, Mac, Linux

RATINGS

Gameplay



Graphics



Sound



Replayability



 Gritty survival feel, Gun effects provides in depth realism, Large map scale

 Buggy, Tends to drop frames randomly

GAME REVIEW

Super Group Power Combine Kick!

By Sharil Abdul Rahman



Playing make believe is never not fun. The world of computer games is basically a whole world where you just make believe that you are another character in another world. But what if you are given the task of managing a make-believe team of TV superheroes? This is the premise of the game *Chroma Squad*.

Another of those games that started off from a crowd-funded project, the team behind the game created a Kickstarter campaign and quickly gain the needed funds and more within the campaign period. After a substantial development period, the game was released last month.

What is immediately apparent is that the game is using some retro charm to pull in the audience. The pixel-art-like design and simple controls belies the moderately intricate story and play mechanic. You are the unseen hand that controls a team of 5 spandex-clad TV superhero that, after a beef with the

previous director, decided to start on their own.

What follows is the classic team management game, where you can control their stats, attributes and even costume – which you can acquire from the store. Of course you need materials for your costume, which you need to gather by defeating the bad guys, and collect the dropped items.

Like the Power Rangers, you can set your super hero team to have traits that can help them in battle. This includes Leader, Scout and Close Combat. Each trait gives different boost to their base stats,

which in turn gives them better fighting power against both the small fry and the big bosses.

Later on, you will also can experience the big robot fights (they are just guys in boxes fighting against a backdrop shhhh). Even here you can tweak your character to get the best out of each fight.

As this is a community-backed game, there are many designs in the game that was created as part of a reward tier during the crowd funding period. There is even a special episode where the game explicitly mentioned about their crowd funding campaign – which is only accessible by the backers.

My only gripe about this game is that it is quite short – at most 20 hours of game play if you take your sweet time to go through the menus and selection. However, new content is constantly being added by the developer, so there will be additional content in the near future. ■

TACTICAL REAL-TIME

Chroma Squad

DEVELOPER Behold Studios

www.chromasquad.com

SYSTEM REQUIREMENTS

PLATFORM : PC, Mac, Linux

RATINGS

Gameplay



Graphics



Sound

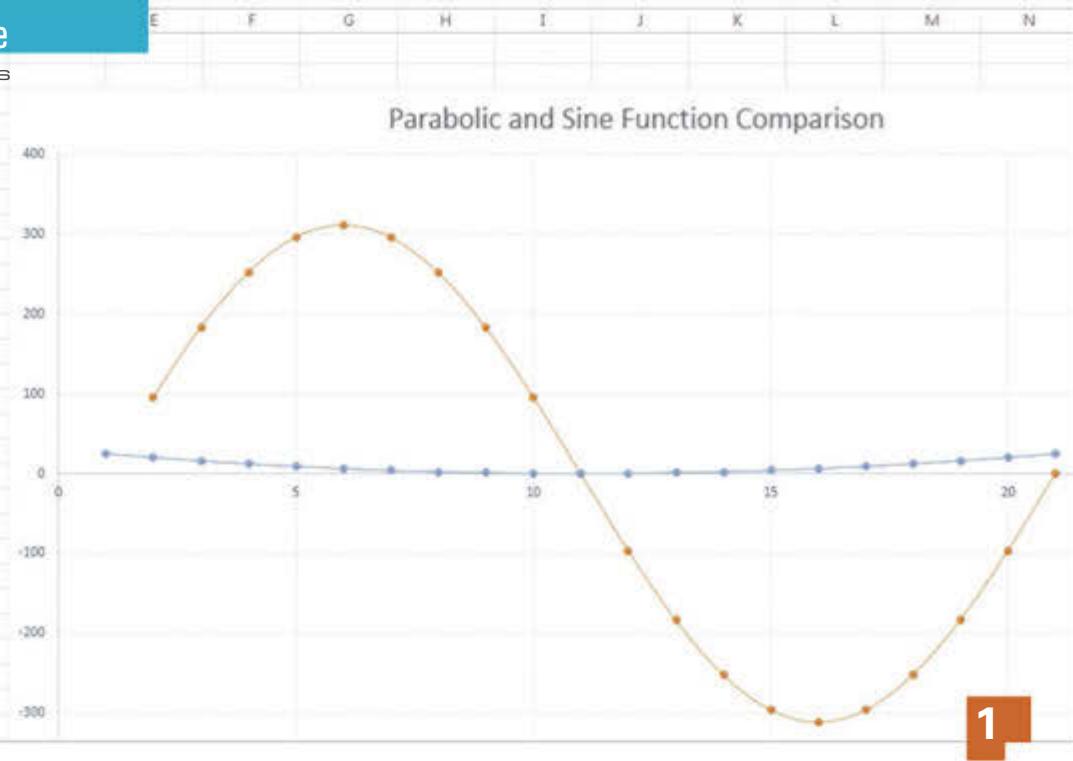


Replayability



+ Engaging story, Simple to understand game mechanic, Retro visuals
- Repetitive gaming

0	0
1	0
2	1
3	4
4	9
5	16
6	25
7	36
8	49
9	64
10	81
11	100
12	121
13	144
14	169
15	196
16	225
17	256
18	289
19	324
20	361



1

Plot Math Functions in Excel

If you are having a problem, or in a pickle in making sense that sine graph work given to you by your teacher, use Excel to make heads or tails of it!

By Markus Hermannsdorfer

Homework becomes easier when you know how to convert Math formulas in Excel and evaluate them using graphs. With typical examples from a routine day in high school, CHIP will show you how to proceed. In steps 1 to 4, you will learn using the example of the Parabola formula $f(x)=x^2$, and see how plotting basically works. Steps 5 to 8 will deal with the same in detail by evaluating a broken rational function and an example from Geometry and Physics.

How to proceed

1 Define the value range

We will define a value range from -3 to 3 for the X axis. The axis should be subdivided into half steps. Consequently, enter the first two values in the cells 'A3' and 'A4'. The value '-3' will come in cell 'A3' and the value '-2.5' will come in cell 'A4'. Select both the cells and drag the lower right corner of the selection frame downwards up to the cell 'A15'. Excel will further enter the missing values for x in the equidistant spaces.

2 Enter function with cell coordinates

The most popular of all quadratic analysis functions is the Parabola. It is calculated using the formula $f(x)=x^2$. For Excel, you can translate this function using the cell formula '=A3*A3' which you can enter in the adjacent cell 'B3'. Thus, the program will

know that it must calculate the value in cell 'A3'. Press the [Enter] key to execute the calculation.

3 Calculate function value for X

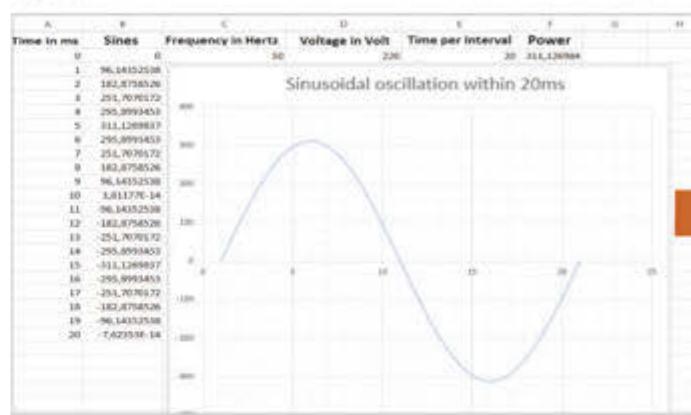
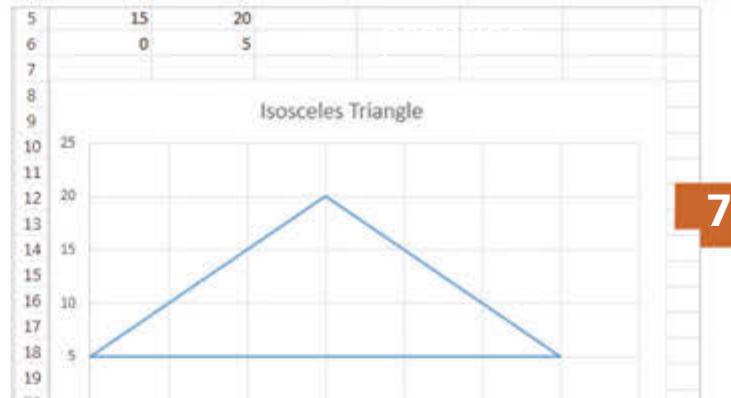
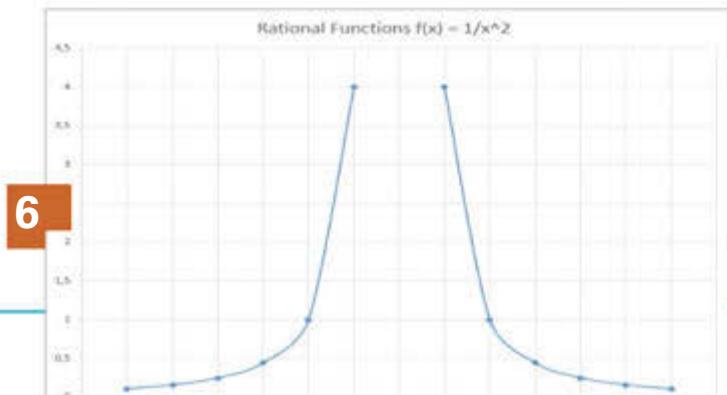
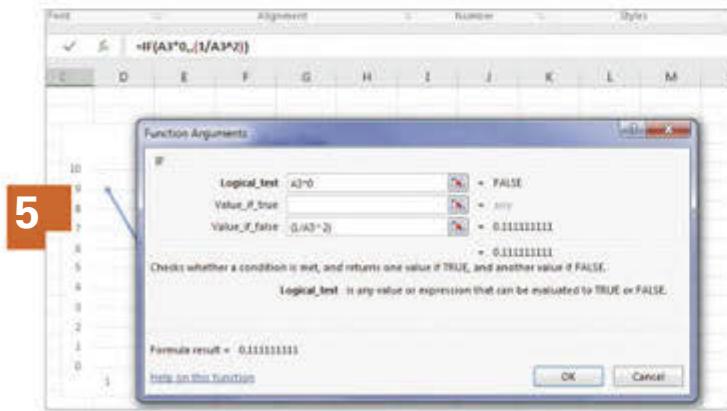
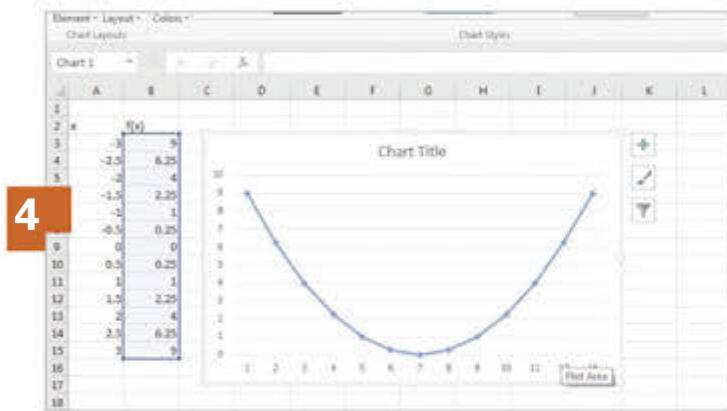
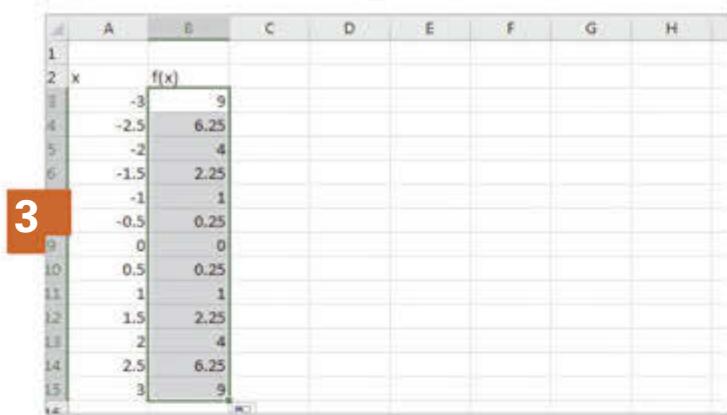
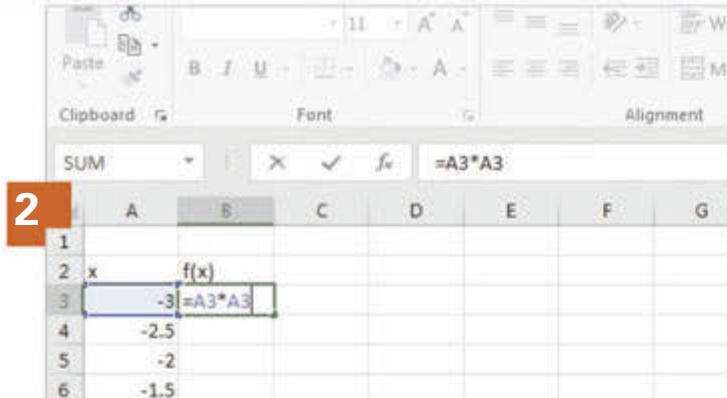
Select the cell 'B3' and drag the selection frame downwards up to cell 'B15'. Excel will now calculate the appropriate function values for x i.e. the coordinates on the Y-axis

4 Plot the Parabola

Select the cell range 'B3' to 'B15' and select a suitable graph type such as 'Line with data points' under 'Insert'. You will immediately see the appearance of the parabola. If you wish to see the values on the parabola, then select the corresponding template via the icon for the format templates. Create the graph till it meets your requirements.

5 Enter broken rational function

Enter fractions in brackets in Excel, for example '(1/A3^2)' for the formula $1/x^2$. The pole (definition gaps) of the broken rational function is always acknowledged by Excel with the error message '#DIV/0!'. This problem can be handled by using the IF function. Select the cell 'B3' and click on the formula icon 'f(x)'. Select the formula type 'IF' and confirm with 'OK'. Now enter the condition 'A3=0' in the first field. In the second row, type '"/"'. Finally in the



third row, you have to enter your formula '(1/A3^2)'. Confirm by pressing [Enter] and drag the selection frame downwards till cell 'B15'. You will now see an empty cell for 'B9'. That is the pole of the graph.

6 Select and edit graph type

You should select the dot graph 'Dots with interpolated lines and data points' as the graph type for broken rational functions because the line graph represents the function sub-optimally.

When the graph is created, double-click on the pole (the point that lies directly on the X axis) and select the option 'No line' in the tab 'Fill' under 'Format data point'. Excel will then hide the excess line between the left Maximum and the pole. Now double-click on the point of the right Maximum and remove the second connecting line to the pole. Now it will look as if it were done in school.

7 Plot geometrical forms

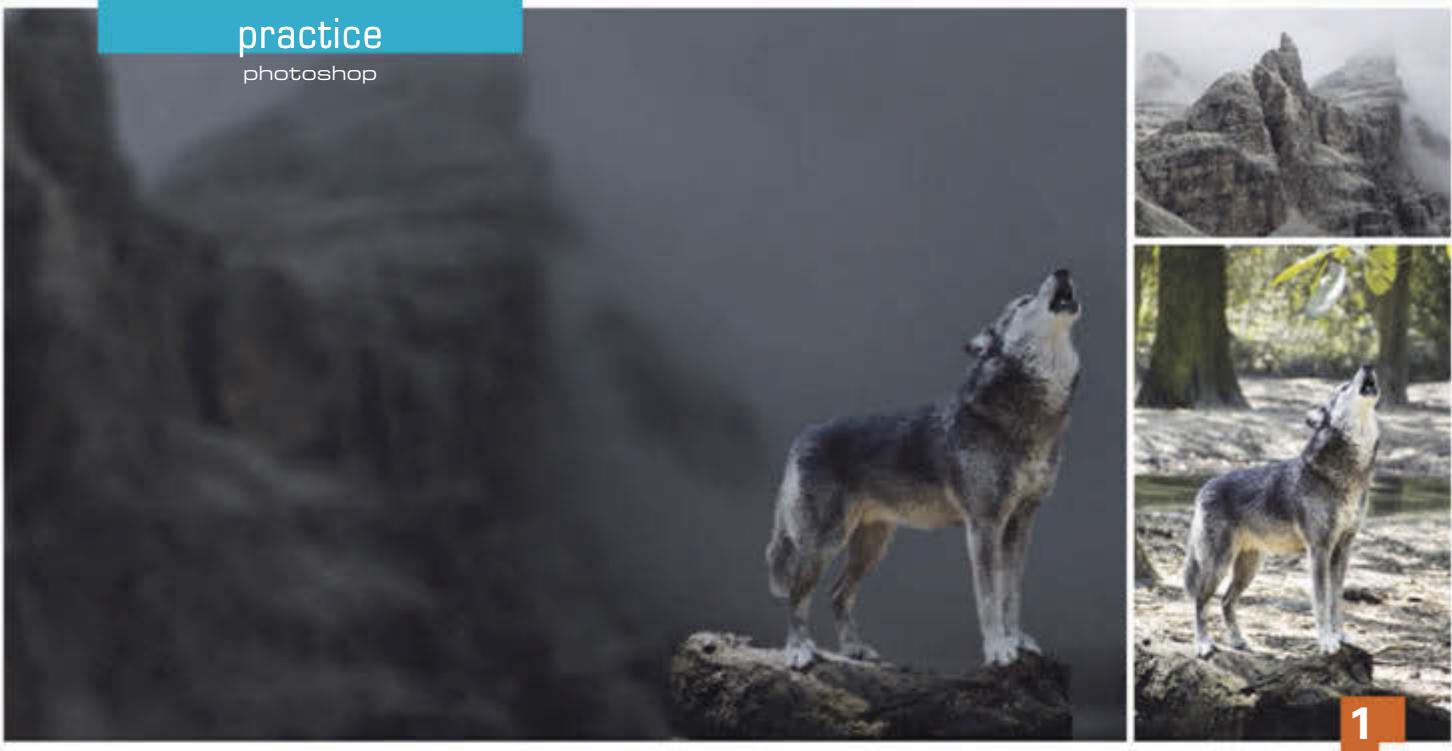
7 Plot geometrical forms

To plot something like an isosceles triangle, type the coordinates of the body on the X axis in the column 'A' under each other.

Example: 0, 30, 15, 0. In column 'B', follow the same process with the coordinates for the Y-axis. In our example, using the values 5, 20, 5 will help you achieve an isosceles triangle.

8 Calculate sine curve correctly

If you use the standard formula '=SIN(Value)', then the result will be wrong as Excel does not work with the angle but with the radian measure. The problem can be eliminated by extending the formula: '=SIN (Wert/180*PI ())'. To plot the graph, enter the time interval in column 'A' and the sine formula in column 'B'. You will also need the inverse of the frequency times 1000 ('1/CELL*1000') and the voltage in Volts which you have to multiply with the square root of 2 - '=CELL*SQUARE ROOT (2)'. We recommend 'Points with interpolated lines' as graph type for sine curves.



1

Get More from Your Zoo Photos

No matter what tricks you use, animals photographed in zoos never appear wild enough. Use the Clipping Mask in Photoshop to add some wilderness into your photos

By Markus Hermannsdorfer

If you take photos of animals in zoo then the result is often falls far from expectation. As the lion is not in the Savannah and the wolf does not want to act wild in his neatly maintained enclosure, the resulting photograph does not match our idea of wild animals. The animal enclosures are to be blamed for this i.e. the background. To come closer to the vision of a wild wolf or a lion in the African jungles, you must do just one thing - put the photographed animal in the correct environment and adjust the light and colours such that the result appears as a natural photograph.

The trick with the Clipping Mask

You need to use the Clipping Mask function in Photoshop so that you can alternately edit the animal and the environment and both can be coordinated accordingly. The quality of the final result depends on your power of imagination. Try to imagine the desired scene, select an animal and background accordingly and just let your creativity flow.

How to proceed

1 Cutting out the animal

First release your subject from his cage where you have to select the background using the magnetic Lasso and remove it via "Edit

Cut". If the animal, the wolf, in our sample photo, is standing on a tree stub or a rock then you can leave this element untouched in the picture. It contributes superbly later in the realistic integration of the animal into the new background.

2 Create Inverse Selection

Once the animal is cut out, take the magic wand and click in the empty area. Ensure that the option "Add the selection" is enabled in the menu bar and add the spaces between the legs of the animal to the selection. Subsequently, in the menu select "Selection | Inverse selection".

3 Add a layer mask

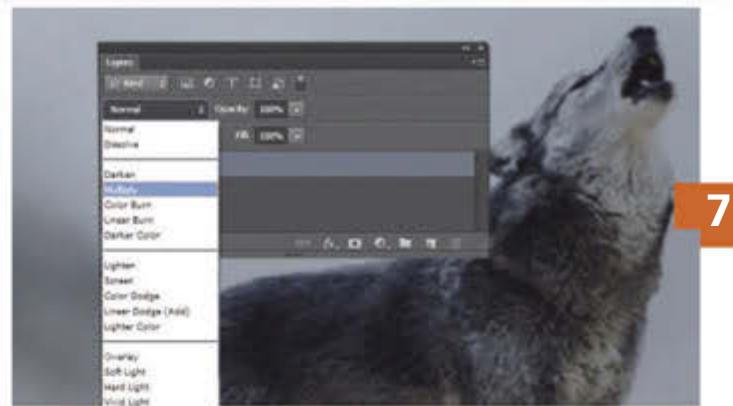
Click on "Refine Edges" in the menu bar. Set the "Contrast" to "15%" and "Shift Edges" to "-7". In the list "Output in:", select the option "New layer with layer mask" and confirm with "OK". You may now delete the layer under it containing the cut animal.

4 Add new background

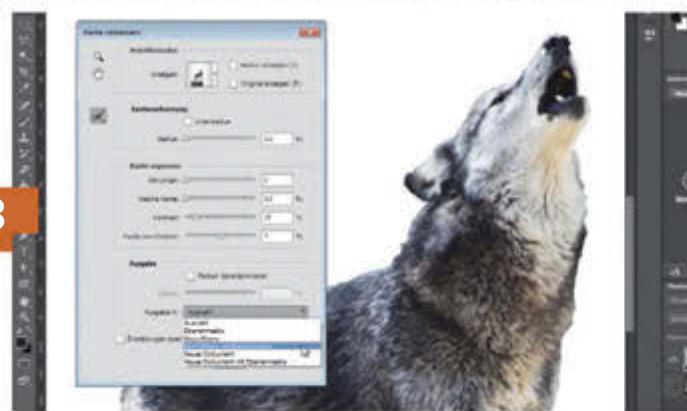
Now load your background image and place it under the layer with the mask. If required, adjust the size of the background and move the animal to the right position. If the background seems too dominant, then select this layer. Go to "Filter | Blur | Lens



2



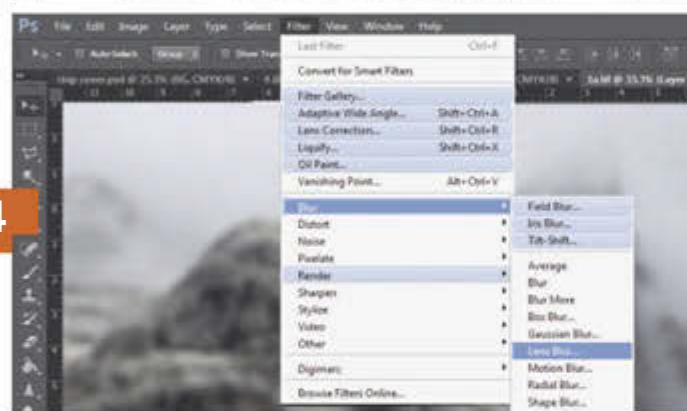
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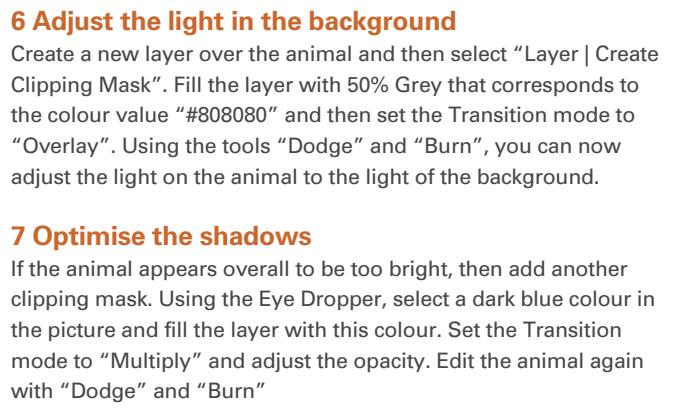
3



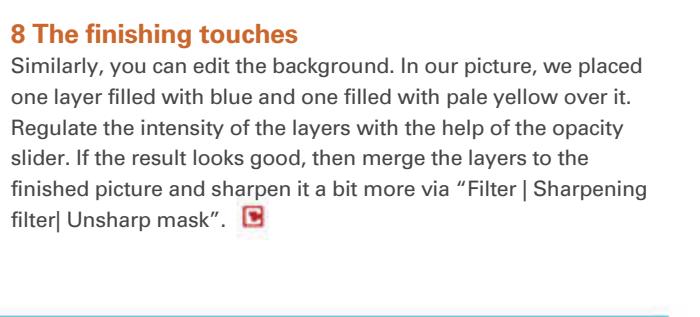
8



4



5



6

Blur" and make the background slightly blurred using the same. The animal now in focus again becomes the main subject of the picture.

5 Repair the fur of the animal

Click on the layer mask and carefully remove the irregular edges using a black brush. The impression that something has been manipulated, is all the more apparent here. To rectify it, open the "Brush Properties" and select the brush "Dune Grass". Go to the tab "Brush" and under "Form properties", set the "Angle Jitter" to "Direction". You can now repair the fur with this brush. Adjust the size such that the hair suits the animal.

6 Adjust the light in the background

Create a new layer over the animal and then select "Layer | Create Clipping Mask". Fill the layer with 50% Grey that corresponds to the colour value "#808080" and then set the Transition mode to "Overlay". Using the tools "Dodge" and "Burn", you can now adjust the light on the animal to the light of the background.

7 Optimise the shadows

If the animal appears overall to be too bright, then add another clipping mask. Using the Eye Dropper, select a dark blue colour in the picture and fill the layer with this colour. Set the Transition mode to "Multiply" and adjust the opacity. Edit the animal again with "Dodge" and "Burn".

8 The finishing touches

Similarly, you can edit the background. In our picture, we placed one layer filled with blue and one filled with pale yellow over it. Regulate the intensity of the layers with the help of the opacity slider. If the result looks good, then merge the layers to the finished picture and sharpen it a bit more via "Filter | Sharpening filter| Unsharp mask".

Tips & Tricks

JUNE 2015

WINDOWS

WINDOWS 7

01 Change the drive icons in two simple steps

If you do not like the drive icons in Windows 7, you can change them with a simple trick. Press [Win] and type "regedit" in the opening window and confirm with [Enter]. Then go to the path "HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Explorer\Drivelicons". If the key "Drivelicons" does not exist, click on "Explorer" and create the key via "Edit | New | Key".

Now, in the same way, create a key for every drive in the "Drivelicons" folder, whose icon you wish to change. Name the key with the drive letter. Create another key with the name "DefaultIcon" in each of these keys.

In the key last created, click on the right side on "Standard". Change the value to "C:\Windows\system32\shell32.dll,X". The "X" is a placeholder

for the desired icon. What you have to use here, you will read it in the next paragraph. Proceed in the same manner with all drives which you wish to change and, in each case, click on "OK".

To find the variables that stand for your desired icon, go to the Desktop and right-click on any link like your browser. Now select "Properties" and go to the tab "Link". Click on "Another Icon" here and type "C:\Windows\system32\shell32.dll" in the field above the icons. Confirm with [Enter]. Now start counting from 0 on top left and go through the icons, column for column, from top to bottom. Enter the number of the desired icon in the Registry instead of "X".

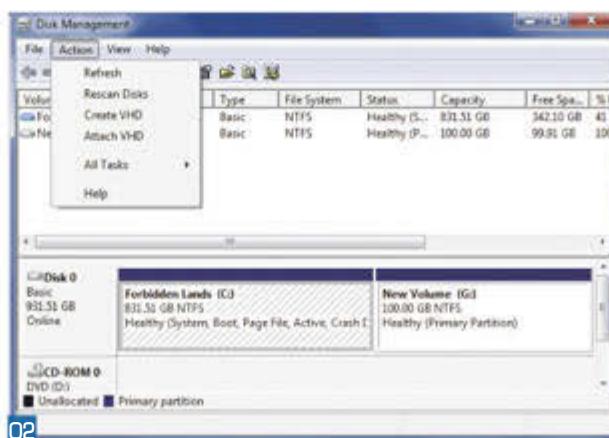
02

WINDOWS 7
Restore individual files from a virtual drive

You can easily restore individual files



You will see suitable icons for your drives under the option »Other Icons«

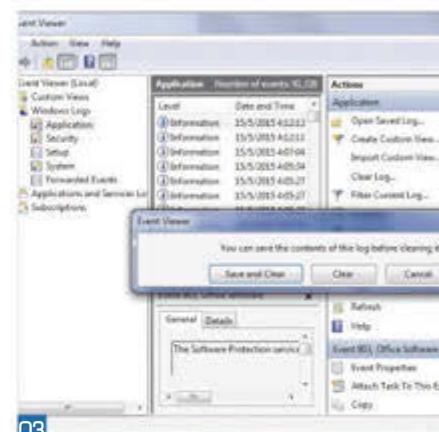


You can add the system map as a normal drive in the media administration

from an existing virtual drive under Windows 7. Open the Start menu and type "diskmgmt.msc" in the search field. Start the application and select the option "Attach virtual disk" in the menu "Action". Now, enter the path for the virtual drive or click on "Search" to find Backup files. Windows will create a new partition on which all individual files will be available. You can simply copy these files into another folder and restore them in this way.

WINDOWS 7

03 Delete all or individual stored logs in the Events Viewer



03
Delete individual logs in the Events Viewer via Actions

In the Events Viewer, you will find information regarding the software errors occurred, on-going process, the boot process or how long your computer is under operation. Windows also stores information there regarding your behaviour on the computer.

To delete this data, press the key combination [Windows] + [R] and type the command "eventvwr". Confirm the mandatory warning message of user account control with "Yes".

Now the Events Viewer will open. Open a category like "Windows Logs" here and then click on a specific log, for example,

"Application". If you wish to delete this log, select the command "Delete Log" in the window "Actions" on the right side and subsequently click on "Empty". Repeat the last step with all logs that you wish to delete.

In order to clean up the entire Events Viewer, the other option is to start a script "Ereignisanzeige.bat" (on DVD0). If you have purchased this CHIP edition without the DVD, then instead, create a new text file and write the following program lines in it:

```
@echo off
for/F="tokens=1,2*%V%IN('bcdedit')d
o%set%
adminTest=%V%
if(%adminTest%)==(Access)goto:noAdmin
for/F="tokens=*"G%in('wevtutil.
exe%el')
do%call:do_clear%G%
echo.
echo%goto:theE nd%
:do_clear%
echo%clearing%1%
wevtutil.exe%cl%1%
goto:eof%
:noAdmin%
exit
```

Save the file as "Event Viewer.bat" and then right-click on the Batch file. Select the entry "Run as Administrator".

The Events Viewer will be completely cleaned.

04

WINDOWS 8 Actions that help when the operating system does not shut down



If Windows 8 cannot be shut down then follow a few simple steps

Sometimes Windows 8 will just not shut down and you want to avoid the hard shutdown of the computer. The best option is to proceed as follows: First close all programs manually. Some programs are in the idle state or some invisible processes

are generated in the background. Check the same with the help of the Task Manager and terminate the corresponding processes and applications.

Remove the connected USB devices like external hard disks and USB sticks from your PC as they may prevent the shutdown. Disable the Hybrid Boot also. For this, open "Control Panel", click on "System and Security" and select "Power Options". Select "Choose what power buttons should do" and then "Some settings are not currently available". Subsequently, remove the check mark for "Activate quick start" under "Settings for Shutdown".

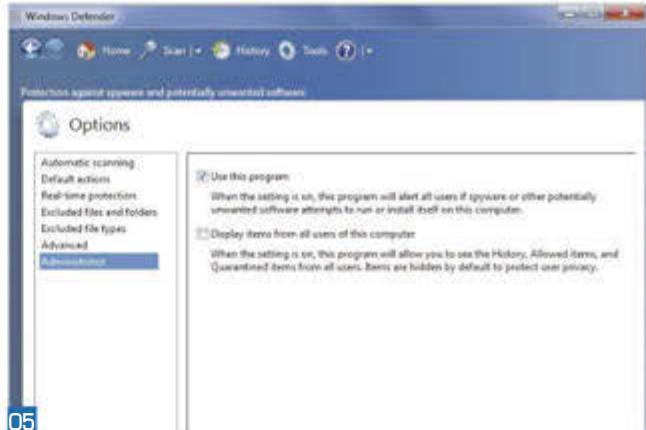
If this does not solve the problem then open the command prompt by pressing the key combination [Windows] + [R] and try to shutdown the PC with the command "shutdown -s -t 1". We also recommend checking the computer using a virus scanner. Perhaps a malware is preventing it from shutting down.

If your Windows 8 computer still does not shutdown then the only option remains is to contact the Microsoft customer service and describe your problem to them in details.

05

WINDOWS 7 Disable Windows Defender while using a virus scanner

If you have installed a good virus protection program, then it is generally better to disable the Microsoft Windows Defender. Thus, you will prevent the conflict of programs.



You can disable Windows Defender via the Administrator settings

Search for "Defender" in the Start menu and click here on the search result "Windows Defender". Once in the program, click on "Extras" in the menu bar and on "Options" in the "Settings". Subsequently select "Administrator" and then disable the option "Use this program". Confirm your decision here by clicking on "Save" and enter the corresponding password if you have not logged in as an Administrator. You will finally receive a message that Windows Defender has been disabled.

06

WINDOWS Call Character Map to insert special characters in the text

The Windows Character Map offers an overview of the entire set of characters which may represent a font type. You can copy special characters such as the Diameter icon from the same and insert them in an open document. In older versions till Windows 7, you can call the character map via "Start



Windows shows a table with all special characters which may represent a font type

| All programs | Accessories | System programs |Character Map". The other option is to open "Run" with [Windows] + [R] and type "charmap" in there. This is the only working option from Windows 8 onwards.

WINDOWS

07 Install preview version of Windows 10 in a virtual PC

Are you curious about the new operating system from Microsoft? A technical preview of Windows 10 can now be downloaded and installed in the VirtualBox - you can thus try the system without changing your PC configuration. You will find the ISO-file including the licence key available for downloading on www.chip.de

Now install VirtualBox (on DVD or chip.de) and start the tool. Click on the button "New" and type the name for the virtual operating system. Under "Type:", select the option "Microsoft Windows". Set "Windows 8.1 (64-bit)" as the version. The next step is to enter the space requirements. We will recommend a minimum of 2 GB here. You must now generate a hard disk for Windows 10. The best option is to use the presets for a hard disk

size of 25GB and click on "Generate". Select "VDI" as the file type of the hard disk and "Dynamically allocated" as the type of storage. Your virtual environment is thus created. You just need to integrate the ISO file of Windows 10 now.

For this, click on "Change" and then on "Mass Storage" in the tab on the right side. Under "Controller: IDE", select the empty image. Other attributes will appear now on the right side. Click on the CD icon to integrate the ISO file. As soon as you click on the "Start" button, Windows 10 will be installed in the VirtualBox.

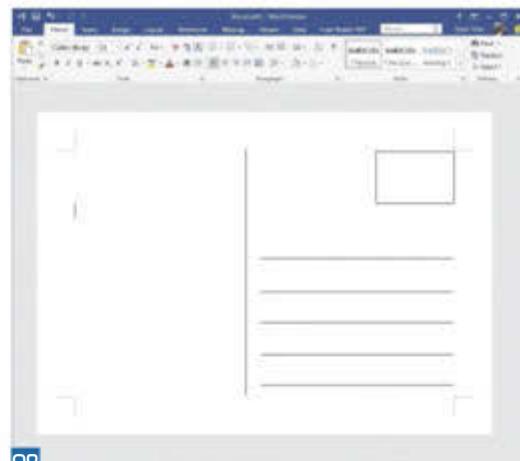
OFFICE

08 WORD

Design & print a postcard using text editor itself

Not only can one buy postcards but also create and print them using Word itself. We are using Word 2013 this time. The individual functions may be arranged or named something else under other versions.

First design the back of the postcard. In Word, go to the "Layout" tab and you will find all the required options under the category "Page



08 Design the back of the postcard with the help of two tables

setup". First, select the postcard size "A6" under "Size". Select "Landscape" format for the "Orientation". Select "Narrow" for "Margins". Now, only the rows for the address are missing. Go to the tab "Insert" and select four rows under "Table". Reduce the table to the desired size and place it at the correct position. You will find the option "Borders" under the "Paragraph" category under the "Start" tab. Remove the left and right borders of the table and there will be four rows remaining. If you wish to create a field for the postal stamp, then this can also be done using a table. Simply use a table for it with only one row and one column.



07 Search the web and Windows

You can try out a technical preview of the upcoming Windows 10 in VirtualBox

For the front side of the postcard, select the A6 format as described in the earlier paragraph. If you wish to insert a picture, then set the page margins always to "0". However, this is not strictly necessary for smaller images or texts.

For printing, the best option is photo paper that can be printed on both sides. It should weigh 360 to 400 gram per square meter so that the postcard is sturdy as well.

09

OPENOFFICE

Merge several documents using one function

You can merge many documents into one file with the help of Open-Office. Open the document that should be the first page, in the Writer and set the cursor at the end of the text. Then click on "Insert" and select "File". Now select the document which should follow the first one. The second document will now be attached to the first one. Again scroll down to the end of the document and add the next text section there. You may need to adjust the gaps between the individual text passages. Finally, save the merged document.

HARDWARE

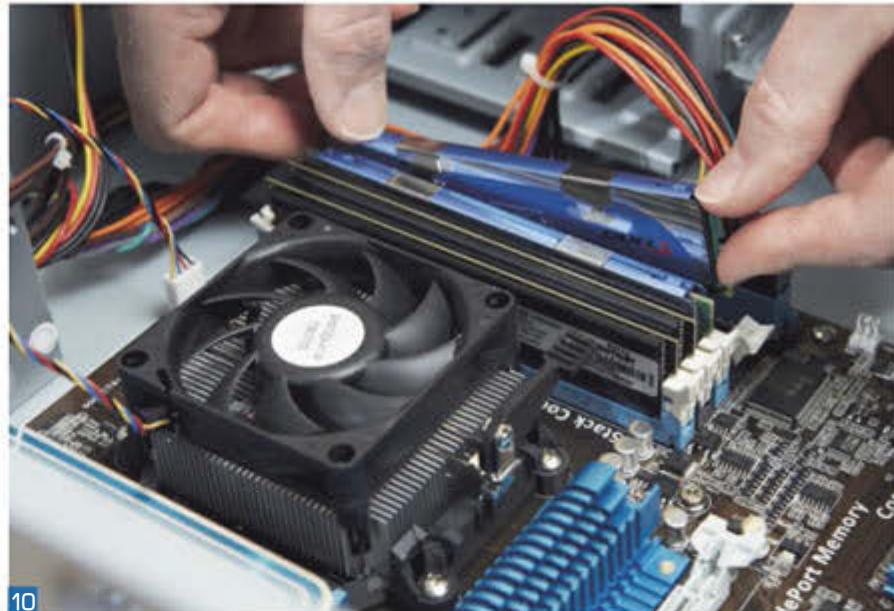
10

MEMORY

Check RAM if it is not recognised by the system

If you have purchased and installed a new RAM, then it may happen that sometimes it is not directly recognised. DDR, DDR2 and DDR3 type RAMs are available in the market. If your computer is from the year 2008 or newer, then it is quite likely that a DDR3 RAM will be required. Check the motherboard manual, often available as a PDF on the manufacturer website, and see which type of RAM is accepted. If you do not know what type of motherboard is installed in your PC, then the tool CPU-Z (on DVD or chip.de) will identify what type of RAM is installed. Simply go to the tab "Memory" for the same.

If you are using the 32-Bit version of Windows then you can use a maximum 4GB RAM. If you wish to install more



10

You will generally need a DDR3 RAM for motherboards from 2008 onwards

RAM then you will need a 64-Bit system. Open the Control Panel and select "System" under the category "System and Security". You will see the size of the installed RAM under "Installed RAM". By the way: The usable RAM is always a few hundred megabytes lower than that installed. If the information does not match the newly installed RAM, you need to install the modules step by step again. Shut down your computer and remove all RAM modules. Blow air into the slots once to remove dust. You can clean the contacts of the RAM using a microfibre cloth. Now, insert one module and start your computer. In the Control Panel, check whether the RAM has been correctly recognised. Shut

down your computer again, remove the RAM module and check all other modules in the same manner. If all modules are ok, insert the first module again, start the PC and check whether compatible. You can now install another module after every start.

11

APPLE MAC

Display the CPU temperature of MacBook or iMac

You can determine the temperature of the processor in Apple computers using an intelligent tool. MacBooks are built for an ambient temperature of up to 30 deg. Celsius and the iMac a few degrees more. Using machines up to



11

The iStat pro integrates itself as a new widget on the Mac. You can call it via Dashboard

these temperatures is safe. However, when you are using the computer on a roof or in a place with less ventilation, the temperature of the CPU unit may increase to alarming levels. iStat pro (download from chip.de) or iStat mini (for OSX Yosemite onwards, price 1.99 €) can be used for constant display of the temperature. You can also see the rotation speed of the fan.

Note The fan speed can also be individually adjusted using the paid version of iStat. However, the free tool is sufficient to read the CPU temperature.

12 SD CARD

Two methods to remove the Write protection from the memory card

If you cannot transfer any data on to your Micro SD memory card, then most probably the problem lies with the activated write protection. You can disable the same through hardware or software. If the card cannot be written with data, then the cause may be an accidentally engaged Lock switch. It is usually located at the top left. Move it to the Unlock setting. Insert the SD card again into the reader and now check whether it is working or not. If Windows has provided the card with a write-protection then start Windows Explorer and right-click on the SD card. In the tab "Security", check whether you have "Full Access" as the authorization. If not then click on the button "Advanced". In the next window, go to the tab "Authorisations" and click on "Change Authorisations". Another window will open. Click on



12

The Lock switch on the top left protects the card against accidental overwriting

"Edit" in this window. Set a check mark for "Full Access" and confirm all open dialogues with "OK".

get a low-noise and a consistently sharp picture.

13 PHOTOGRAPHY

13

LIGHT

Good internal photography even in bad light

When photographing indoors, you often have to struggle with too less light - especially in the evening or at night time. For example, if you are shooting people then you will need a low shutter speed to freeze their movements. Set the f-number as low as possible and increase the ISO value. In doing so, proceed only till it is actually necessary because higher the ISO value, noisier the picture will be. The maximum open aperture and thereby also the possible shutter speed depends on the lens used. A real secret among hobby photographers is the economical 1.8 lens with 50mm focal length from Canon, Sony and also Nikon. Even if the light from the flash creates an unnatural light mood, it is sometimes the only alternative.

If the camera is fixed to a tripod, then you can work comfortably with a longer shutter speed of several seconds. Set the ISO value of the camera as low as possible and increase the f-number (e.g. to f/8). You will thus

14

EFFECTS

Paint with light: Creating spectacular Light-painting pictures

Light painting looks difficult than it is. Only a few tricks are needed. You will need a dark room or you will have to take photos at night so that your light painting looks impressive. You will also need a table lamp or another light source. Be creative and also try a sparkler, a glow stick or colourful slides over the light source. A remote trigger will be optimal so that you can start the shoot yourself. Also keep in mind to wear dark clothes so that you cannot be seen in the photo.

Focus your camera at a distance at which you wish to subsequently paint. The ISO setting should be low or else you will get noise in the pictures. Set the exposure time as long as possible. Select a small aperture i.e. a large f-number in the camera and paint your light painting.



13

Stationary objects in bad light can be captured with a tripod and long exposure times

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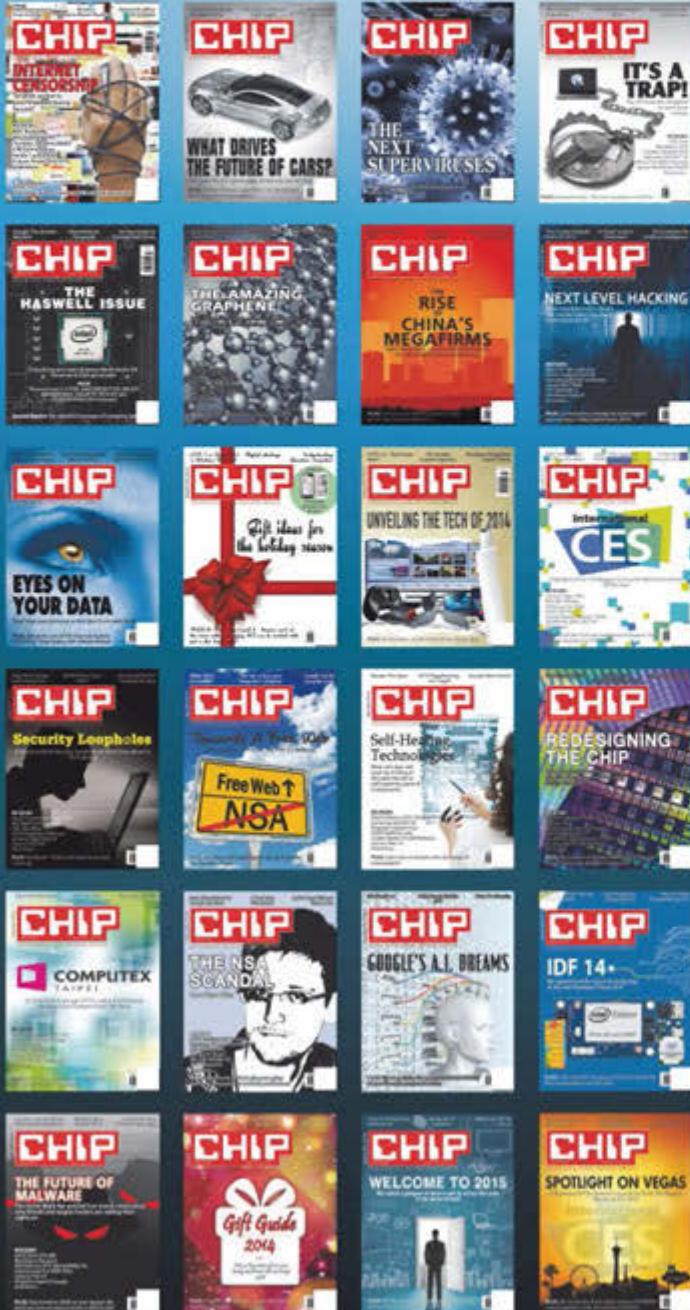
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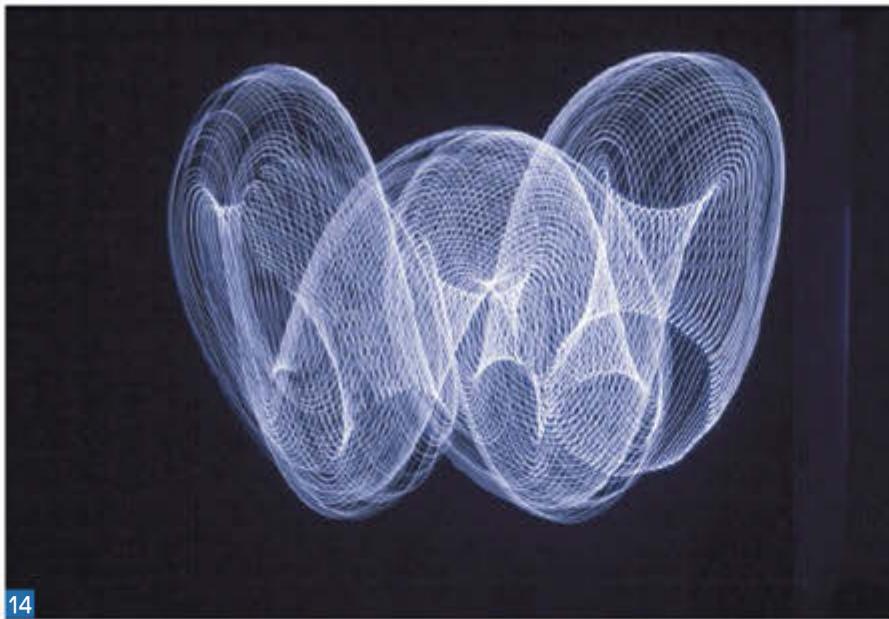
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14

Stationary objects in bad light can be captured with a tripod and long exposure times

15

INSTAGRAM

Upload pictures without a smartphone, from the PC or Mac

You can directly upload pictures also from the computer using a free tool. Download the Gramblr tool from www.gramblr.com and install it. After starting the tool, log in with your Instagram credentials. Now click on "Choose File" to upload a photo. The picture must have a precise resolution of 650 x 650. You can also add a description to the photo after clicking on "Upload". After confirmation, Gramblr will post your picture.

16

SOCIAL NETWORKS

FACEBOOK

Supress tagging on photos by others

16

If you do not wish to see any tagging on Facebook, then you can simply prevent it. For this, log in to Facebook and open "Settings" on the top right menu. Then go to the category "Timeline and Tagging". In the first section you will see the option "Review posts friends tag you in before they appear on your timeline?". Select the



15

Gramblr tool uploads photos from your PC to Instagram

option "Enabled" here.

In the third section, you will see the option "Review tags people add to your own posts before they appear on Facebook?" You must also enable the function here. From now on, you will not only receive a message regarding tagging but you need to confirm them before getting published on Facebook.

17

YOUTUBE

Set parental control for the video service on the PC and on your smartphone

By using the secure mode of YouTube, it is possible to hide inappropriate or offensive content. For this, go to the YouTube website. Scroll down till you find the settings for Country and the "Safe Mode" right at the bottom. Enable the function by selecting the Dropdown menu and then clicking on the "On" button. Confirm this change by clicking on "Save".

You should also make the video service child-proof on your smartphones. Select the three dots (Android) or the Gearwheel (iOS) in the YouTube app. On Android, you will find the safe mode under "Settings | General" which you can activate by tapping on it. In case of the iOS-YouTube app, you need to go to "Settings" and then select "Safe Search" or "Safety Mode". You can block adult content for children by tapping on "Strict". 



16

Stationary objects in bad light can be captured with a tripod and long exposure times



6/2/2014 - Intel engineers fly a drone in the hall to pass the Intel Compute Stick to the stage



28/4/2015 - Models holding up Huawei's new Honor 6 Plus smartphone



28/4/2014 - Models showing off the Canon's new 750D



5/5/2014 - Rukhmani of Microsoft Malaysia showing how artists can use the Surface 3 tablet to bring their creativity to life



29/4/2015 - Julian Thean, Product Manager for Samsung Malaysia doing a presentation using Samsung's new Samsung Galaxy Tab A tablet device



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28/4/2014 - Models showing off the new HTC One M9+ in Silver Grey and Gunmetal Grey



15/5/2014 - A Sony Product Manager showing off the capabilities of the Sony Android TV to the crowd



9/5/2014 - KL Live was packed with customers who are eager to get their hands on the brand new ASUS Zenfone 2 smartphone



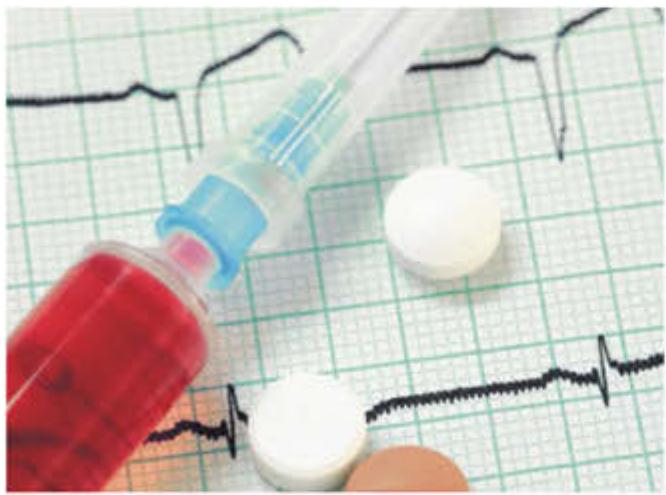
15/5/2015 - A close-up look at Sony's new Android-powered UHDTV

Next Issue



COMPUTEX 2015

We take a visit to the biggest component trade show in Taiwan, and we will share the best and greatest technology that we can pick on from the booths and trade lanes in Taipei.



No More Passwords

Passwords made up of letters, digits and special characters are no longer enough for total security. We will show you how to protect your accounts against hackers and peep into the future where pills and blood vessels will serve as access control

Spy Factory

Data espionage scandals in recent times have shown that manufacturers are installing sniffer tools in their devices that collect personal data to give customised advertisements. CHIP explains how to put an end to the sniffing business.

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